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Beat

#239 | 12-2025

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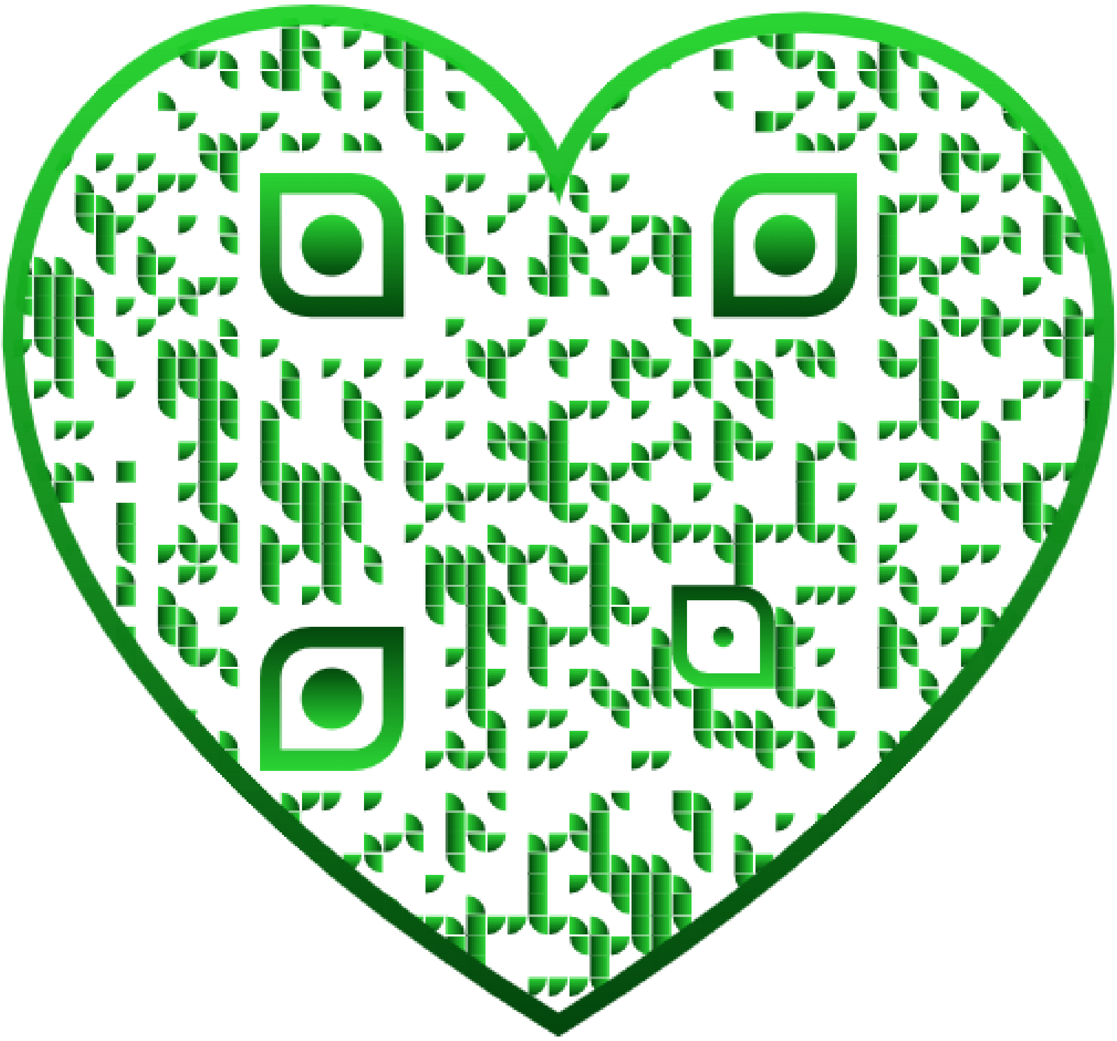

ARTURIA
_The sound explorers

_Arturia **MiniLab** 3

Your MIDI controller keyboard for on the road

MiniLab 3 offers intuitive and expressive control with a high-quality keyboard, integrated pads and faders, and direct connection to Analog Lab and DAWs. The real-time mini display ensures easy operation – ideal for beginners and professionals alike.

ARTURIA
MINILAB3
ARTURIA
MINILAB3

Hi-Hats ... why Hi-Hats of all things?!

The comparison may be flawed, but in our eyes, hi-hats are like cups and tea lights: They're incredibly unspectacular, but **you can‘t do without them**, and in the best case scenario, they create a good atmosphere. They carry the groove of a track, are needed for every style of music, and even have a **major influence on the stereo width** of the overall mix.

That‘s why we're dedicating a whopping 18 essential pages to them, starting with general tips for browsing and trying things out, and then delving deeper and deeper into the subject matter. Required reading for anyone who wants to get away from robotic staccato beats.

And there‘s an **exclusive online tool for Beat readers** that lets you easily build beats in your browser and export even more patterns. Take a look on page 17.

We also have another current topic on our minds: Artificial Intelligence. It polarizes and can be unsettling, but the technology is here and isn‘t going away. With this issue, we are expanding the existing section to explore this topic in more depth. To explain the tools, **reveal some of the magic behind** them, and also **point out their limitations**. Because just because it says AI on it doesn‘t always mean it‘s intelligent.

With that in mind, enjoy reading and learning!

Marco Scherer
BEAT editor in chief

More for less!

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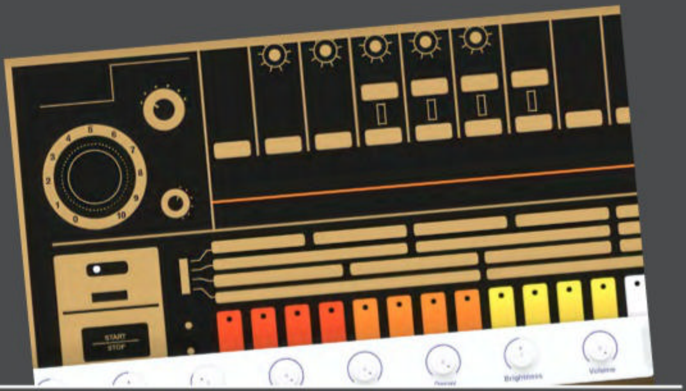
SOFTWARE HIGHLIGHTS

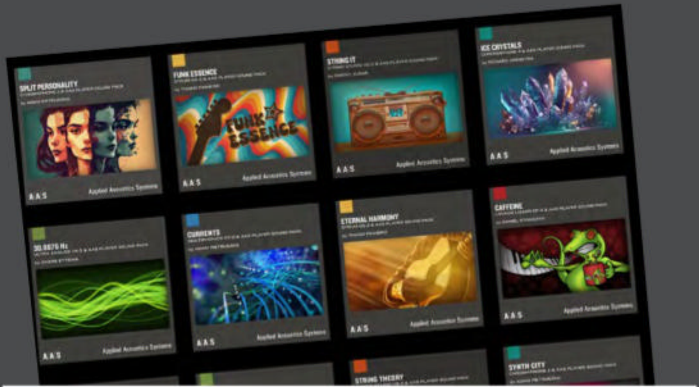


The cult drums with SSL punch

Ultimate 808 for Wavea Flite

With Ultimate 808, Wavea delivers an explosive expansion for the free sound generator Wavea Flite Play, which includes hundreds of finely tuned samples from the legendary drum machine. Of course, we are talking about the Roland TR-808, which was recorded for the ultimate punch using a noble SSL G-Series console. The result: fat, punchy, and dynamically playable drums that you can make fit for any style with the macro controls.

Download: see page 9 | **Info: wavea.co** win | mac

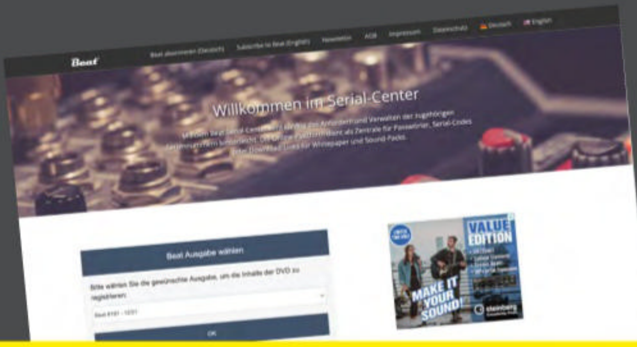


Choose freely from 78 packs

2 instruments from AAS

This month, Applied Acoustics Systems is rewarding you twice! Two sound instruments of your choice are waiting for you—packed with inspiration for your next tracks. And the selection is huge: choose from 78 packs—whether fat vintage synths, trendy club sounds, experimental modular sequences, or otherworldly soundscapes. Your next musical adventure starts here.

Download: see page 9 | **Info: applied-acoustics.com** win | mac



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Beat
ZAMPLER//RX
POLAR FOX
BEAT PLATINUM SELECTION

The 74 Best Patches from the Virus

Polar Fox

The best can hardly get any better - but we did it anyway! The POLAR FOX expansion brings you 74 of the very best patches from the legendary Virus TI synthesizer, given a final polish with meticulous analog post-processing. Thanks to tube compression, our Pultec EQs, and stereo widening, these sounds are even punchier, warmer, and wider than the originals. From leads and pads to basses - this is the most authentic way to bring the Virus into your tracks!

Download: see page 9 | **More packs: zamplersounds.com** win | mac

Beat #239 – Exclusive software
More than 12 GB of valuable plug-ins and samples for download

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DOPEAMMO & MARVELLOUSCAIN
DRUM&BASS FUSION VOL2
JACKIN TECH HOUSE
ZTEKNO
ONSLAUGHT

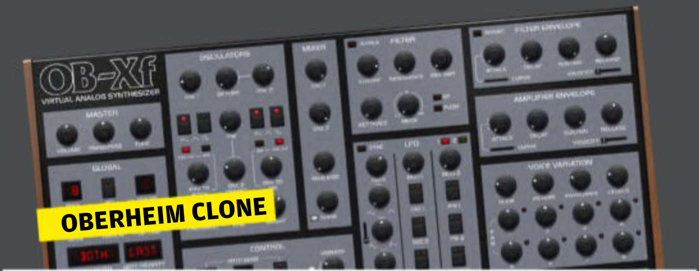
5.5 GB
Drums & Loops for Techno, Disco & Dubstep

Cult drums bring you our magazine highlight Ultimate 808 as a full version into the studio. Hundreds of drum samples from the Roland TR-808 have been collected and refined with the sound of an SSL console. As a second highlight, you can choose two instruments from AAS as a full version.

The crème de la crème of the best patches from the legendary Virus TI synthesizer has been compiled for you in our Expansion Pack Polar Fox for the Zampler and AKAI MPCs. Through analog refinement, the 74 patches with leads, basses, and pads sound even more powerful, warmer, and wider than the originals.

Our 5.5 GB large sample archive this month is a colorful mix across electronic music. From Bigroom & House, through Dubstep to Tech-House by ZTEKNO and Disco, diversity is the order of the day here. There is also a first-class multisample organ for common sampler formats with the TownHallOrgan.

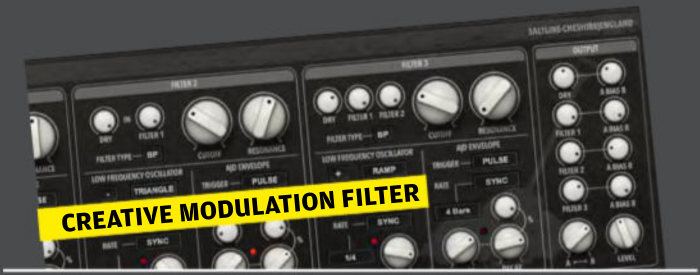
Content compiled by the Beat editorial team



Surge Synth Team OB-Xf

The OB-Xf is an open-source synthesizer that emulates the Oberheim synth legend. The fat basses and crisp leads are generated by two oscillators with PWM. A mixer with noise generator, as well as a multimode filter, two envelopes, and two LFOs are on board. Numerous presets invite you to start production immediately.

Download: see page 9 | **Info: github.com/surge-synthesizer** win | mac | linux



Decadebridge Shallow Bridge

A filter plugin with three filter modules (lowpass, bandpass, and highpass) offers Shallow Bridge. However, the highlight is the modulation section with a multi-wave LFO and an AD envelope (attack/decay) so that you can incorporate creative filter effects into your sound design.

Download: see page 9 | **Info: decadebridge.com** win | mac

Exclusive download:
The Beat Studio

2.2 GB
Polar Fox for Zampler & Akai MPCs

Apsonic Speedrum BE

Powerful drum sampler with 16 MPC-style pads

Acon Dynamics BE

All-rounder with compressor, expander, and gate

Thorn Solo

Brutal monosynth with all the refinements

Zampler//RX

REX and SFZ Player with Mod-Matrix & Parameter Sequencer

Convology XT

Masterful convolution reverb with legendary H90 reverbs

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HI-HATS & TOP-END

The perfect drums and hi-hats for your next beats and songs! Our masterclass shows you how to choose or design the right hi-hat sound, use stereo width creatively, and shape your signature groove with micro-rhythmic finesse. Use compression, transients, and EQs to create crackling drum textures, punchy snares, and rolling fills—from synths, grooveboxes, or field recordings. In the bonus chapter: miking, recording, and mixing acoustic drums. As a Beat reader, you'll get over 666 MIDI clips with finished beats and hi-hat patterns for free! Plus a market overview of the best tools for mixing and recording drums and hi-hats. **From page 14**

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Make your studio more valuable! This month, there are a whopping 12 GB of plug-ins, sounds, and samples for your tracks.

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This month with Christian Morlock

SONICWARE
LIVEN
Evoke
EV'OK

Test: Sonicware Liven Evoke

The Liven Evoke ambient synth combines acoustic sounds, granular synthesis, and cinematic reverberation spaces. **Page 72**

Discovered: Siselabonga

Amapiano, Kwaito, Gqom – African electronic music is finally getting the attention it deserves. Siselabonga are part of this movement, combining warm rolling basslines, MPC-inspired drums, utopian synthesizers, and vocals that range from coolness to ecstasy. **Page 34**

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Free: Ultimate 808 für Wavea Flite
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Current news on
www.beat.de

Test: Oberheim TEO-5 Desktop

Following the Take-5, the TEO-5 is now also available in a compact desktop case, and you couldn‘t get a genuine Oberheim synthesizer any cheaper than this! **Page 74**

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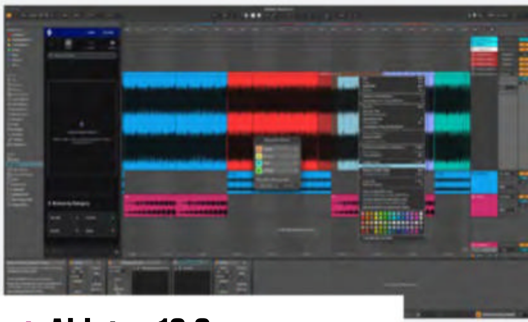

Test: Ableton 12.3

Live 12.3 feels like a major upgrade with stem separation, native Splice integration, and bounce functions. **Page 58**

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Beat
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The common thread: Beat magazine 12/2025

For many years, Beat has been inspiring its readers not only with practical and musical topics, but above all with the tight integration of editorial content. From the very beginning, Beat has been about creating, about the structured building of ideas and the common thread – in the magazine as well as in the tracks. This navigator shows you the highlights of this issue and allows you to see the big picture.

HI-HATS & TOP-END
NO MORE ROBOT GROOVES!
THE SOLUTION FOR MORE HUMAN FEEL

Masterclass: Hi-Hats & Top-End

The perfect drums and hi-hats for your next beats and songs! In our masterclass, you‘ll learn how to shape hi-hats, use stereo width creatively, and create signature grooves with micro-rhythmic details. Discover how to use compression, transients, and EQs to conjure up crackling textures, punchy snares, and rolling fills from synths, grooveboxes, or field recordings. In the bonus chapter: miking, recording, and mixing acoustic drums—plus 777 free MIDI clips and a market overview of the best drum tools! **From page 14**

Test: Oberheim TEO-5 Desktop

Test: Oberheim TEO-5 Desktop

Following the Take-5, the TEO-5 is now also available in a compact desktop case, and you couldn‘t get a real Oberheim synthesizer any cheaper than this! But the TEO-5 Desktop is anything but a slimmed-down version. Apart from the keyboard, you only have to do without a few controls compared to the TEO-5 Keyboard. **Page 74**

Cult Drums with SSL Punch

Free: Ultimate 808 für Wavea Flite

With Ultimate 808, Wavea delivers an explosive expansion for the free sound generator Wavea Flite Play, containing hundreds of finely tuned samples from the legendary drum machine. We are, of course, talking about the Roland TR-808, which was recorded on a high-end SSL G-Series console for the ultimate punch. The result: fat, powerful, and velocity-sensitive drums that you can tailor to any style using the macro controls. **Page 44**

»For us, the album is the format in which we prefer to bundle ideas.«
Art and deadlines

Portrait: Soulwax

Whether as DJs, producers for other acts, remixers, or label owners of Deewee, Stephen and David Dewaele have a packed schedule. The wait for a new Soulwax album was worth it: “All Systems Are Lying” combines all the ingredients that fans of the band have always loved, from electro to dance and indie. We spoke to the two of them on a Zoom call about the making of the album and their diverse work. **Page 38**

Test: Sonicware Liven Evoke

Test: Sonicware Liven Evoke

The Sonicware Liven Evoke is a versatile synthesizer specializing in ambient and experimental sound design. With its unique mix of acoustic instrument sounds, granular effect synthesis, and cinematic reverberation spaces, it aims to set itself apart from other synths and grooveboxes. We took a closer look at Evoke, from its sound architecture and performance to its workflow and creative potential. **Page 72**

Beat

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Magazine

by Carl-Philipp Schmeller

Mobile 14-track recorder from Zoom

The LiveTrak L-6max from Zoom combines a mixing console, recorder, and audio interface. With its handy format, this digital console makes it easy to create podcasts, streams, and music recordings. The L-6max offers 6 inputs (4 XLR/TRS combo jacks with low-noise preamps and two stereo inputs), as well as separate headphone outputs for up to three users. You can record 12 tracks plus two stereo mix tracks. Thanks to flexible routing options and on-board effects, you can create custom mixes and one-touch recordings. Particularly practical: the integrated recorder saves directly to an SD card at a resolution of up to 96 kHz/32-bit float, which guarantees maximum dynamics and protection against clipping. Via USB-C, the device also becomes a multi-track audio interface for PC, Mac, or iOS, but can also be built into a Eurorack if required. The four stereo line inputs now feature switchable -20 dB PADs for direct connection of older synthesizers or Eurorack modules.

The LiveTrak L6max will be available at the end of the fourth quarter of 2025 at a price of 459 Euro.

sound-service.eu | www.zoomcorp.com

More info

Precision and dynamics with Fostex headphones

Fostex is expanding its RP series with two new headphone models: the closed-back T50RPmk4CL (primarily for recording monitoring) and the T60RPmk2CL (for listening/mastering). Both use the 4th generation RP planar driver, stronger magnet arrays, and redesigned diaphragms for greater control and sensitivity. This ensures precision, dynamics, and musical depth, resulting in detailed monitoring and precise mix control. In addition, the impulse response has been improved, making transients even clearer and more natural. The T50RPmk4CL is a closed studio model with optimized padding and a narrower soundstage, covering a frequency range from 10 Hz to 40 kHz. The T60RPmk2CL is the high-end model with a solid black walnut wood housing and also features a closed-back design with premium wood earcups and flexible cable options for studio reference listening tests and critical mastering. Balanced connection options and high-quality cables are included.

Both models are now available from specialist retailers for 313 Euro (T50RPmk4CL) and 641 Euro (T60RPmk2CL) respectively.

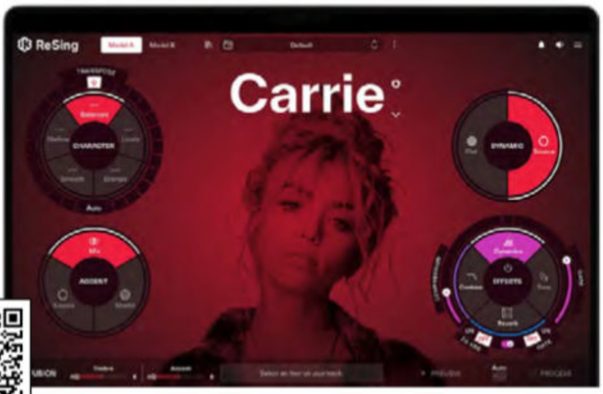
megaaudio.de | www.fostex.jp

More info

Authentic singing thanks to AI-powered voice modeling with Resing

IK Multimedia introduces ReSing, a groundbreaking plug-in and standalone app that revolutionizes vocal recording and music production. Thanks to advanced AI technology, ReSing captures the timbre, expression, and nuances of real artists‘ voices, delivering ultra-natural vocals that are virtually indistinguishable from live recordings. English and Spanish are currently supported as language models, with more to follow in the growing library. The highlight: With ReSing, you can also model your own voices locally on your computer—no cloud, no waiting, no uploads. You can also license your own voices. Up to 25 voice and instrument models are already included. Support for RVC community models is also provided. If you find yourself struggling with the vocal tracks in your mixes in the future, you can replace them with authentic vocal models.

ReSing will be available at the end of October. ReSing Free is a free version with two voices, instruments, and user models. ReSing will retail for €129, while ReSing MAX will cost 199 Euro.



ikmultimedia.com

More info

Mobile subwoofer with battery operation & Bluetooth

Mackie is expanding its Thump series with the new ThumpSub GO, a battery-powered, portable subwoofer designed specifically for deep bass frequencies. The subwoofer features a compact and ergonomic design that makes it easy to transport. DJs and sound professionals can use it anywhere to produce powerful bass. The ThumpSub GO runs on two GB-200 batteries, which provide up to 12 hours of operation. Conveniently, one battery can be used while the other is charging. The subwoofer can be operated flat or upright and carried comfortably like a briefcase. The ThumpSub GO can be optimally combined with the Mackie Thump GO speaker and other speakers with up to 10“ drivers. It also offers Bluetooth® streaming and can be used as a wireless PA system. With 2x 8“ woofers, the subwoofer delivers precise low bass and, thanks to a phase reversal switch and various operating modes, ensures perfect adaptation to the speaker system.

The ThumpSub GO will be available in the fourth quarter of 2025 at a price of 659.99 Euro.

mackie.com

More info

Video and audio productions on 4 tracks

TASCAM introduces the FR-AV4, a compact 4-channel field recorder for film and video productions. The device offers 32-bit float recording with dual A/D converters and four Ultra-HDDA microphone preamps. The built-in mixer allows the four channels plus a stereo sum to be recorded directly to SDXC cards (up to 512 GB) at sampling rates up to 192 kHz. In addition, the integrated timecode generator with TCXO, HDMI synchronization, timecode in/out, and Atomos/Bluetooth sync options ensure precise synchronization of image and sound. A versatile tool, the FR-AV4 also serves as a USB-C audio interface—with 6 inputs and 2 outputs—for Mac, Windows, iOS, and Android, offering the same dynamic range as in field operation. Thanks to Ambisonic support (A and B formats), 360° productions are also possible. Automatic file backup every 20 seconds protects against data loss. The device is controlled via a color touchscreen, jog wheel, or the “Tascam Recorder Connect” app, which allows up to five recorders to be operated wirelessly. The battery-powered FR-AV4 is available now for 898 US-Dollar.

tascam.eu

More info

BLACK LION AUDIO

Revolution
evolution.

Revolution 14x16
14-in/16-out USB-C audio interface and word clock with ADAT, Auteur preamps, and headphone mixer.

Vertrieb: AUDIOWERK www.audiowerk.eu info@audiowerk.eu https://www.blacklionaudio.de/revolution-14x16/

Complete mobile studio for beat makers and live performers from AKAI

AKAI has unveiled the MPC Live III, the new all-in-one studio for beatmakers, producers, and live performers. Compared to its predecessor, it now features an 8-core processor with four times the performance, eight GB of RAM, and 128 GB of storage. The standalone studio, which does not require a computer, even has a condenser microphone for field recording, vocal recording, and sampling. Another new feature is the MPCe pads with 3D sensor technology. This not only controls the velocity, but also the X/Y movements on the pad surface. Effects and modulations can also be assigned and controlled in real time via the new touch strip. There is also a 16-step sequencer. Editing is easy via the 7-inch color display. Connections include two XLR/jack inputs with microphone amplifiers, six line outputs, and 4x stereo CV/Gate outputs. Two MIDI IN/OUT jacks and a USB-C port are also included. Stereo studio monitors are also worth mentioning.

The MPC Live III is now available from specialist retailers for 1,649 Euro.

akaipro.com

More info

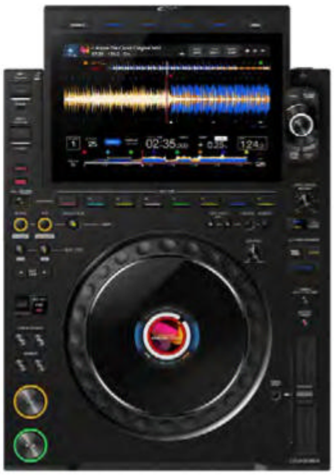
Finally: Polyphonic aftertouch for analog synthesizers from Sequential

Fourm is the new analog synthesizer from Sequential. It is based on the legendary Prophet-5 sound and offers four analog voices with dual oscillators, a classic 4-pole low-pass filter, and envelopes modeled after the original. The two oscillators and LFO feature simultaneously selectable waveforms. Particularly noteworthy is the newly developed Tactive Slim-Keys Poly-AT keyboard, which enables polyphonic aftertouch in a Sequential instrument for the first time in 40 years. This keyboard provides a deeper and more expressive connection between player and instrument. Other highlights include the modulation matrix, which, modeled after the Pro~One, enables user-friendly, menu-free sound design, and the arpeggiator with sequencer mode and 128 presets. The feedback drive circuit also provides a particularly aggressive sound. The Fourm offers a variety of connectivity options such as MIDI, USB, and footswitch inputs, and comes in a sturdy steel case. Weighing 3.97 kg and with compact dimensions, the Fourm is also ideal for mobile musicians.

Fourm is now available to order for 949 Euro.

sequential.com

More info



DJ media player with NFC touchpoint from AlphaTheta

AlphaTheta has unveiled the CDJ-3000X, a new high-end media player and modernized successor to the previous CDJ-3000. One of the most important new features is the integrated Wi-Fi, which eliminates the need for a cable connection to the network. Instead of a CD drive, an NFC touchpoint has been integrated into the front panel. This allows users to log into the player via the Rekordbox app on their smartphone and access playlists. Direct access to streaming services such as TIDAL and Beatport is guaranteed. At the center is a 10.1-inch touchscreen display that can show up to 16 tracks simultaneously. Playlists can also be edited directly on the device. Another new feature is the USB-C port, which replaces the previous SD card slot. Compatible sticks can still be connected via the USB-A port. The cue and play buttons are also certified for more robust operation. Another advantage is the full track buffer in the internal memory for uninterrupted playback. The performance mode in rekordbox can also be activated without an additional license.

The CDJ-3000X is now available for 2,799 Euro.

alphatheta.com

More info

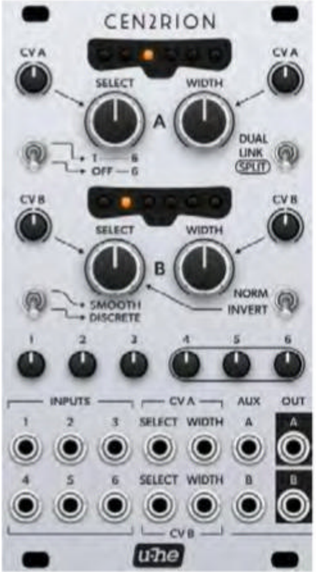
Eurorack module for mixing and signal distribution from u-He

u-he expands its Eurorack portfolio with CEN2RION, a scanning mixer with six inputs, each with matching controls for intensity, and two outputs. The module can process both audio and CV signals simultaneously. CEN2RION is a powerful module for mixing, signal distribution, and creative FX routing in Eurorack, opening up new possibilities for modular sound design. The module works with twelve VCAs, each controlled by Select and Width – both parameters are controllable via CV per layer. CEN2RION offers three operating modes: Dual, Link, and Split. In addition, two blend modes can be selected between adjacent channels: SMOOTH for smooth transitions and DISCRETE for hard channel boundaries. Switching is done with a short release time and without audible clicks—inspired by Vactrol technology. Particularly flexible: The module's AUX jacks can be configured as inputs or outputs, allowing CEN2RION to be used as a submixer or in combination with other mixers. The power consumption is specified as 160 mA @ +12 V, 120 mA @ –12 V.

The 14 HP wide Eurorack module is sold for 399 Euro.

u-he.com

More info



Missing pickup:

» Guitar seller‘s car has been stolen. «

// Lukas Schütte, ESI Audio

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HI-HATS & TOP-END

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The perfect drums and hi-hats for your next beats, songs, and productions! Our masterclass shows you how to choose the right hi-hat sound or design your own, utilize the full stereo width, and shape your own signature groove with micro-rhythmic finesse. With the correct use of compression, transients, and EQs, create crackling drum textures, punchy snares, and rolling fills – based on synthesizers, grooveboxes, and even field recordings. In the bonus chapter, you‘ll also learn everything about miking, recording, and mixing acoustic drums. And watch out: As a Beat reader, you‘ll receive over 200 MIDI clips with ready-made beats and hi-hat patterns for free! Plus, a market overview of the best tools for mixing and recording drums and hi-hats. Beat Magazine couldn‘t fit more content!

by Max Gebhardt, Mario Schumacher, Vera Schumacher, Elijah Hussock, Marco Scherer

9 Tips for crisp drums

1 Tune drums

It may seem meticulous, but tuning your drum sounds is essential if you want to get maximum impact from your production. The overall mix will then sound much clearer, more defined, and more harmonious. To find the right pitch, we recommend using either a spectrum analyzer or an EQ with a graphic frequency overview.

Play the drums solo one after the other and find the peak frequencies in the analyzer. These usually correspond to the fundamental pitch. Then transpose the drums to match the key of your song. If the difference is more than three semitones, you should consider a different drum sound, otherwise the quality will likely suffer. Alternatively, tools like Melodyne can be used to find and adjust the pitch.

2 Make space

The type and number of drums used vary depending on the song and style. However, there are certain frequency ranges where sounds feel „at home.“ You can find these ranges in the overview on the right. We definitely recommend lowering certain frequencies rather than boosting others.
For example, to make room for the kick, cut the bass on all other drums. Or to give vocals more space, lower the range around 2 kHz on all drums by 2-3 dB. Besides adjusting the frequencies, also make sure that drums with similar frequencies aren‘t heard at the same time.

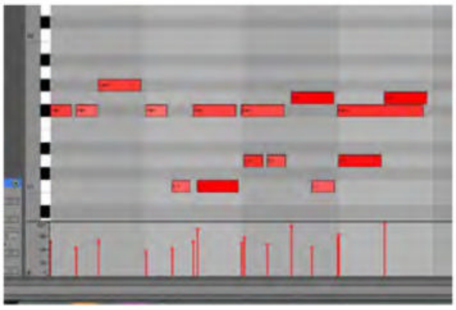
3 Add more punch to the mix

A trick that works great for melodic instruments: As in the first tip, use a spectrum analyzer to find the peaks of each drum and reduce them by about 2–3 dB with a bandwidth of 3. To compensate for this, you can also increase the overall volume of the sound by 2–3 dB. If you do this consistently for all drums, the overall mix will end up being quite a bit louder.

4 Pimp up the drums

The groove is perfect, but the recording of the drum kit is suboptimal? Or the samples simply don‘t have the right punch? Here‘s a solution: Load a short reverb (300–400 ms), set its low cut to 600 Hz so that no bass is lost, and mix it in subtly – so that it‘s just barely audible.

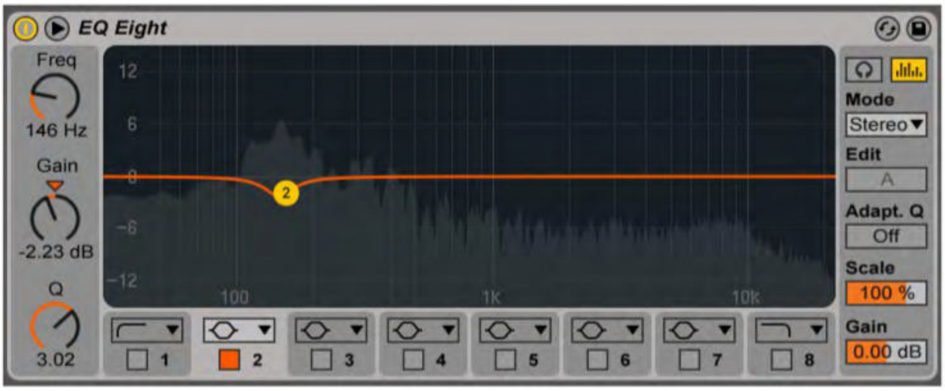
Load a compressor after that and let it do its thing as hard as it can. Good Urei 1176 emulations like the T-RackS Black 76 [1] perform particularly well with the Ratio ALL function and the INPUT gain turned up. These compressors compress everything mercilessly. For acoustic drums, you can place a tube amp like the freeware TubeSaturatorVintage [2] in front of the reverb and slightly increase its DRIVE, BASS, MID, and TREBLE.



5 Loosen up rigid grooves

Quantization is a great way to tighten up any beat in no time. But be careful: quantization doesn‘t automatically mean more groove, because there‘s almost nothing more boring than perfectly straight beats. To loosen them up, it‘s worth shifting individual claps, snares, or other sounds by a few milliseconds.

On the one hand, this may reduce the amount of interference between different drums, and on the other hand, the beat will sound much more lively and full. Different velocity values also have a positive effect. Swing/shuffle quantization is also a good option for electronic genres.



6 Embellish beats

If the swing and dynamics from the previous tip aren‘t enough, try loading an atmospheric effect, such as cricket chirping, forest noise, or another texture, onto an audio track and adding a compressor. Activate the sidechain and use the drum track as the incoming signal. Set the maximum threshold, set the attack to short, and set the release to 200 ms. This way, the atmosphere effect only comes through in the gaps and fills the remaining emptiness. However, the 200 ms delay doesn‘t appear immediately, but rather fades in, adding more groove. Just make sure the beat actually has enough gaps. Any hi-hats or rides that rattle through should be deactivated or moved to a second track.

7 Layering drums

If the snare drum alone doesn‘t have the punch, maybe it will when paired with another? Layering snares and claps is common practice in all genres. The only thing to keep in mind is that the sounds should complement each other and not take up space.

As in tip 3, you should find the main frequencies of the sounds and make sure that not all of them are in the same spectrum. It also makes sense to distribute the sounds in the panorama.

8 Sample manager

Some DAWs offer browsers where you can add tags for samples, while others have search functions. Use both to avoid wasting time searching for sounds. If your DAW doesn‘t offer a suitable function, a sample manager is definitely a good idea. ADSR offers a free manager on their website [3].

9 Copy grooves

If your groove doesn‘t work with your own, maybe it will with another? DAWs like Ableton Live or Studio One offer the option of copying the groove of existing tracks to other tracks. In Live, the function is called „Extract Groove“ (right-click on a clip); in Studio One, you switch from „Grid“ to „Groove“ in the menu at the top.

In the section to the right of the buttons, you see the current groove in the form of lines. Drag a clip into the area, and its timing is analyzed, allowing you to copy it to other clips. ⁘

---

[1] ikmultimedia.com; [2] wavearts.com; [3] adsrsounds.com

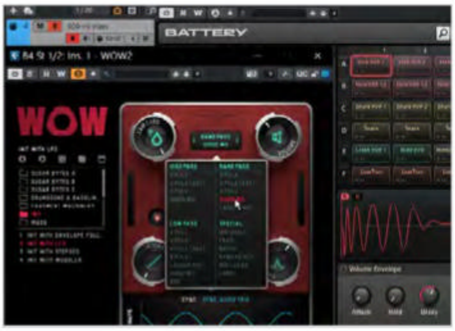
Top-end sounddesign with WOW2

Let your hi-hats groove!

No matter what style of electronic music you produce, static hi-hat patterns can quickly sound boring. With the powerful multi-filter Sugar Bytes WOW2 [1], you can add movement to your sound, for example, with pulsating filter effects on hi-hats or rhythmic rain noise. We'll also show you how to coax cool hi-hat patterns out of complex beats.

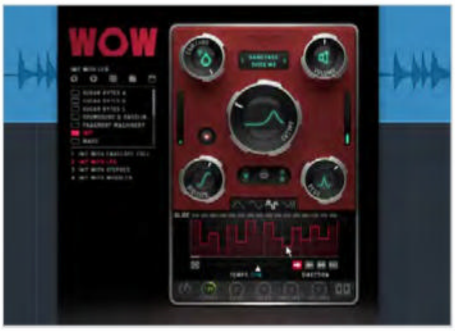
Get your BEAT digital subscription now and get Sugar Bytes WOW2 for free!

www.beat.de/digiabo



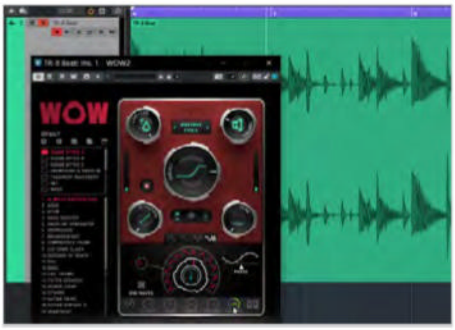
1 Enliven static hi-hats

WOW2 is ideal for livening up straightforward hi-hat loops like our audio file „909-Hi-Hats." Load WOW2 as an insert effect and start with the Init preset. Select the filter type **Band Pass Diode MS**, set the cutoff to 10 o'clock, and the resonance to around 1 o'clock. Now use the step sequencer to modulate the cutoff value.



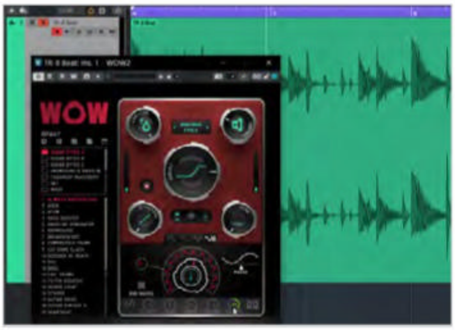
2 Want a lo-fi sound?

Choose a tempo of 1/16 and draw in any sequence to create a rhythmic filter movement. The **Digitize** distortion model gives the hi-hat loop a dirtier character. Increase the intensity as desired. The result is a grainy sample rate reduction that complements the filter modulation beautifully.



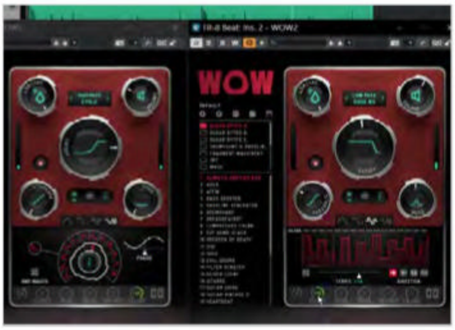
3 Filtering hi-hats from beats

Got a cool drum loop, but only want to use the hi-hats and high percussion? WOW2 can help here, too, and it's much more vibrant than any EQ. Drag a drum loop like our „TR-8 Beat" into your DAW and load WOW2 as an effect. To isolate the hi-hats, we'll use the **High Pass 2 Pole** filter model with a **high cutoff** value.



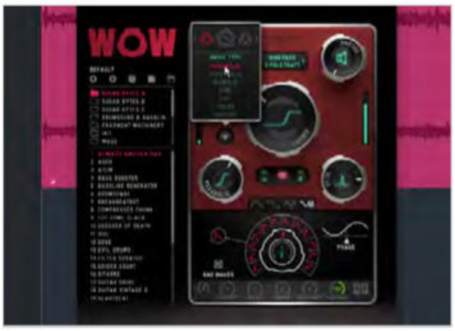
4 Variety

The Wobble Generator modulates the **volume** value at a rate of 1/8. This makes the hi-hats sound even more percussive. You can create even more variety with a second instance of WOW2. Try the **Low Pass Diode MS** model with the cutoff and resonance controls in the middle position and modulate the filter frequency with the step sequencer.



5 Rain as a top-end loop

Experiment with the order of the two effects. You can also create exciting top-end loops from field recordings like our audio file „Rain." Here, we use a **High Pass 2 Pole (Sat)** with a **cutoff** at 10-11 o'clock, high resonance, and activated **Vowel** mode. The step sequencer modulates the **cutoff** value at a rate of **1/16**.



6 Talking rain

A slow LFO (**rate: 1/1**), on the other hand, controls the **vowel** values. A **Parabolic** distortion adds a bite. For an eighth-note rhythm, the **Wobble Generator** modulates the **volume value at 1/8** to rhythmically chop up the sound. This transforms the rain loop into an organic percussive texture that gives your track more drive.

---

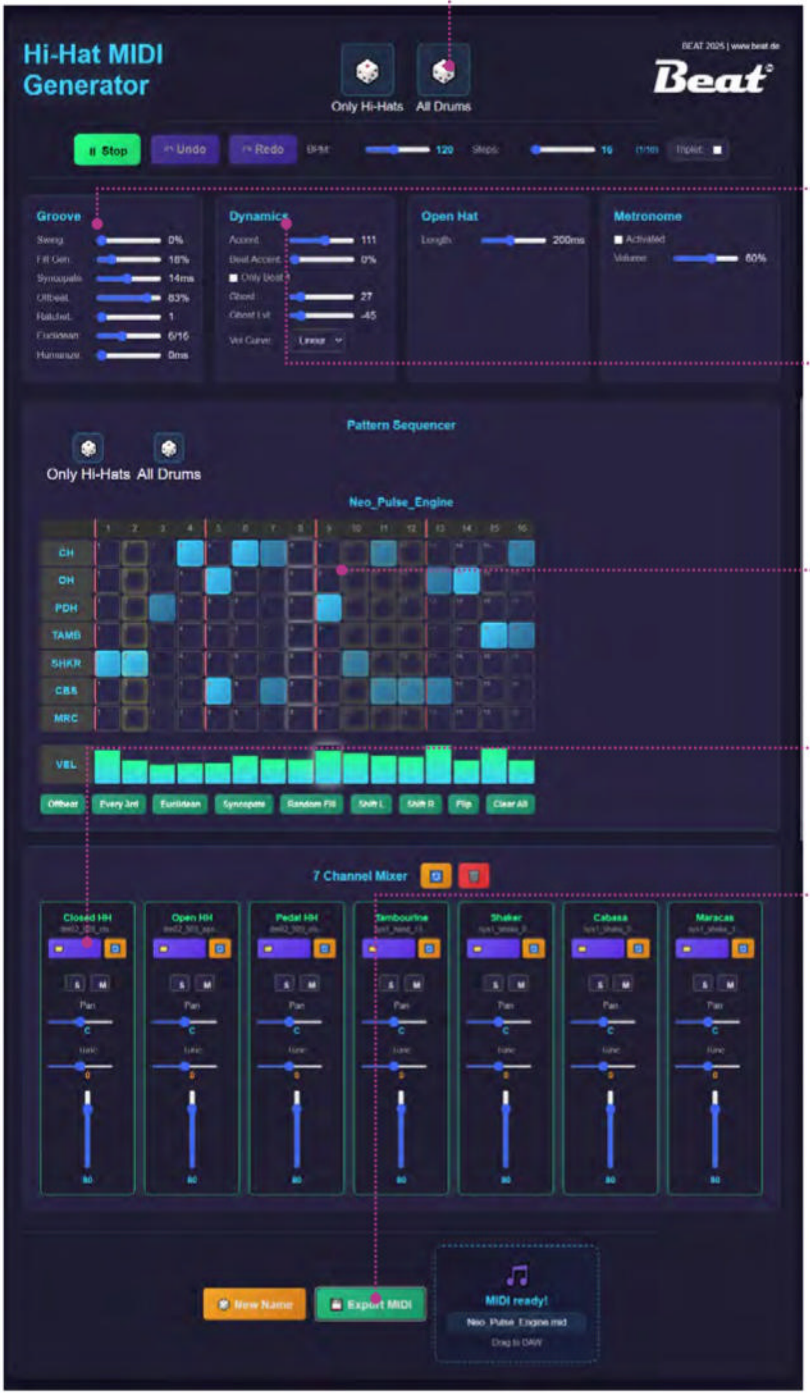
[1] Demo: www.sugar-bytes.de

Create your own grooves with the Hi-Hat MIDI Generator – directly in your browser and completely free! www.beat.de/hihats

Exclusive: Hi-hat MIDI generator

Free, endless grooves

Always the same 16th-note hats? With our Hi-Hat MIDI Generator, you can create organic rhythms with swing, dynamics, and character – quickly, musically, and inspiringly. The free web app delivers fresh patterns for hi-hats, shakers, tambourines, and more at the touch of a button and allows export in MIDI format.


Hi-Hat MIDI Generator
Only Hi-Hats
All Drums
BEAT 2025 | www.beat.de
Beat
Stop
Undo
Redo
Groove
Dynamics
Open Hat
Metronome
Pattern Sequencer
Only Hi-Hats
All Drums
Neo_Pulse_Engine
CH
OH
PDH
TAMB
SHKR
CBS
MRC
VEL
7 Channel Mixer
Closed HH
Open HH
Pedal HH
Tambourine
Shaker
Cabasa
Maracas
New Name
Export MIDI
MIDI ready!
Drag to DAW

Groove control
Who says you have to laboriously click together hi-hat grooves in your DAW? Our Hi-Hat MIDI Generator creates lively rhythms with just a click of a mouse. With the dice functions, you can instantly create fresh hi-hat and percussion patterns that always make sense and are in time.

Fresh inspiration
The Groove section of the Hi-Hat MIDI Generator gives you full control over rhythmic parameters such as swing, syncopate, and offbeat, creating complex yet always musical patterns.

Dynamics & feel
What separates good hi-hat patterns from great ones? Dynamics. Accents and ghost notes bring the groove to life: They provide excitement, movement, and that subtle „push" that makes you tap along. New variations are just a knob turn away.

Pattern sequencer
Seven drum tracks, from closed hi-hat to maracas, provide plenty of top-end variety. You can either create new patterns by randomly selecting them or program them in detail, including velocity values.

Mixer & sound design
In the 7-channel mixer, you can adjust the volume, tuning, and pan position for each instrument. You can even load your own samples using the folder icon.

MIDI export & workflow
You can export your pattern directly to your DAW as a MIDI file using drag and drop. A handy feature: General MIDI mapping ensures that all tracks can be played directly in drum plug-ins.

SPEEDRUM BE
DRUM PACK #1

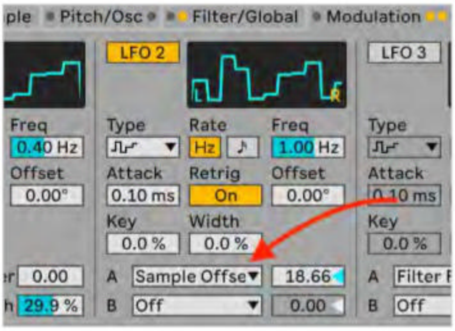
SPEEDRUM BE

To get you started right away, the Speedrum BE drum sampler with 66 production-ready kits awaits you in the downloads.

Hands-on: Hi-hat workshop

6 Quick tips for a better top-end

Before we get into the nitty-gritty on the next few pages, we'll start with a small collection of tips that show you how to make shakers, hats, and other top-end material more dynamic, lively, wider, more realistic, and more entertaining. And you can do this with any modern sampler. So, let's get started...

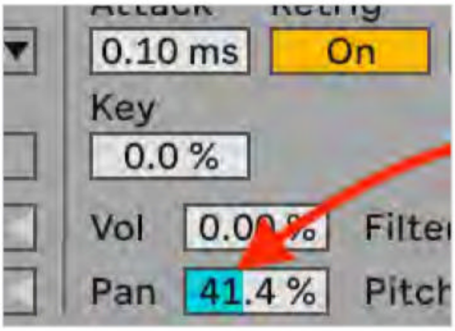


ple • Pitch/Osc • Filter/Global • Modulation

Freq 0.40 Hz
Offset 0.00°
LFO 2
Type
Rate Hz
Freq 1.00 Hz
Attack 0.10 ms
Retrig On
Offset 0.00°
Key 0.0 %
Width 0.0 %
A Sample Offset 18.66
B Off 0.00
r 0.00
h 29.9 %
LFO 3
Type
Attack 0.10 ms
Key 0.0 %
A Filter F
B Off

1 Modulate the offset

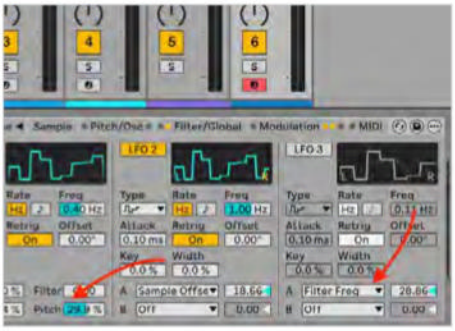
A first option for avoiding machine-like hats is to shift the sample start point with each trigger. While this would reduce the punch of drums, snares, or basses, it makes shakers and the like significantly more lively. To do this, simply connect an LFO with a random waveform to the sample start or offset at about 20%.



0.10 ms
On
Key 0.0 %
Vol 0.00 %
Filte
Pan 41.4 %
Pitch

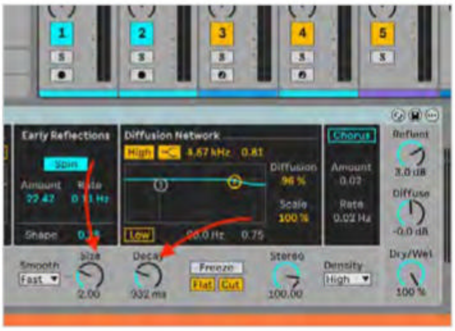
2 Vary the panorama

Using the stereo panorama is similarly simple but effective. To do this, modulate the panorama parameter with an LFO, but set the intensity to a maximum of 50% and the LFO tempo to about 0.40 Hz, otherwise the modulation becomes hectic and the listener can no longer identify the sound. The LFO's retrigger option is also useful.



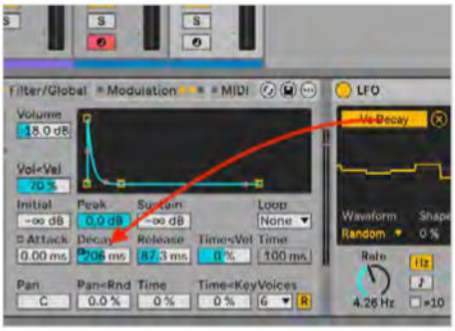
3 Pitch and filter

We can also modulate the pitch and cutoff of a low-pass filter for the sample using a random LFO, but keep the intensity minimal, as otherwise the results would be hectic and unrealistic. This is a different story with synth drum plug-ins; with samples, it's more likely to backfire. An intensity of 20-30% provides sufficient variation.



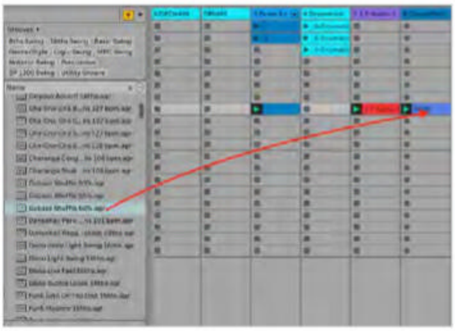
4 Reverb, but gentle

Often underestimated or completely forgotten: reverb on drums! It's the same with vocals: It should sound natural, so minimal use is strongly recommended – unless the effect is part of the sound design. So, short reverb tails under a second instead of endless shimmer verbs, and smaller rooms rather than cathedrals.



5 Dynamic decay

Most shaker or hat sounds are short, but it makes sense to add accents with longer-playing sounds. And if that happens by chance, it grooves even more: So, set sustain to zero and, if possible, connect a random LFO with amp decay at about 30% intensity. A starting value of 200 ms is recommended.



6 Groove is a must

The irregularities in the sound caused by modulation are one thing, but variations in timing are just as important – a well-timed shuffle goes straight to your feet. In Ableton Live, you simply drag any groove from the browser onto your hi-hat clip. In other DAWs, you'll find the option directly in the quantization settings.

Alternative to compression

More presence with nvelope

If drums aren‘t punchy or are too punchy, Transient Designer is pretty much the best tool you can have. It divides a sound into attack and midrange, which can then be boosted or reduced independently. It‘s a typical tool that, once used, you‘ll never want to be without. But why? What‘s the magic behind it? We‘ll explain...

A quick overview: What do Transient Designers do?

- **Increasing the attack:** Makes percussive elements like bass drums or snares more present and assertive in the mix.
- **Reducing the attack:** Makes the sound softer and less aggressive, useful, for example, when a guitar pick or strum sound is too harsh.
- **Sustain:** This control lengthens or shortens the decay time, or „body,“ of the signal.
- **Increasing the sustain:** Adds length or reverberation to a sound, for example, to give a tom-tom drum more „body“.
- **Reducing Sustain:** Makes the sound shorter and more transparent, useful for reducing unwanted reverb or the ringing of a snare drum.

The classic: elysia nvelope

The nvelope is a powerful and versatile transient shaper for recording, mixing, and mastering. It is available both as a hardware device in various versions, including 19“ rack, 500 Series, and Qube, and as a software plug-in.

The elysia nvelope was developed by Ruben Tilgner, the founder and CEO of elysia, who invented the original Transient Designer technology at SPL in the late 1990s. The nvelope is considered a further development of this original concept.

The nvelope can alter signals subtly or drastically by providing direct access to attack and sustain. This effectively shapes individual signals, and this tool also produces astonishing results in a mix.

Unlike a compressor, the processing is not dependent on a threshold and, in Dual Band mode, can be specifically restricted to a specific frequency range using the Freq A and Freq B controls.

As a welcome side effect of its special topology, the nvelope can also transform into a shelving EQ. This is achieved by temporarily disabling its dynamics sections while the filter stages remain active. Freq A determines the frequency for the high shelf filter, and the Attack control determines the amount of boost (to the right) or cut (to the left) in this band. Similarly, Freq S determines the frequency for the low shelf filter, and Sustain determines the amount of boost or cut.

The special circuit technology enables another feature that is otherwise rarely found in equalizers: The two channels not only function as two separate EQs, but can also be linked for convenient editing of stereo material.

www.elysia.com

NVELOPE 500
Attack
Freq A
Sustain
Freq S
elysia
NVELOPE
MASTERING EDITION

Audio demos of the nvelope

The best way to get an impression is to listen to it yourself. Here you go...

	OFF	ON
Mono room microphone in the drum mix		
Drum bus		
Electronic music		
Acoustic guitar (less attack)		

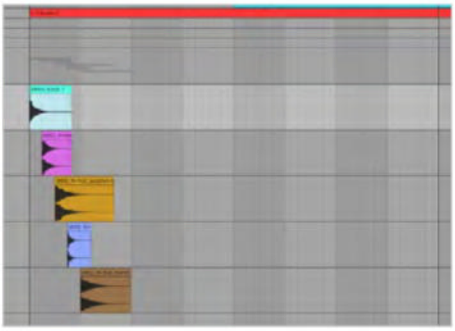
Sefan Colsmann, elysia
Photo: Negative by Nature

It‘s hard to imagine today: before the development of the Transient Designer, level-independent dynamic processing was simply not possible. A device that let me create crisp drums without having to worry about thresholds or time constants, and with essentially just two controls... That was a sensation! The nvelope‘s frequency-selective mode gives you significantly more control over the processing. It also opens up entirely new areas of application for transient processing: more complex individual signals, stereo sources, bus tracks, even entire mixes... A Mastering Edition of the nvelope is also available, which offers reduced excursion with greater precision. The nvelope‘s EQ mode deactivates the dynamics section, resulting in a great-sounding 2-band stereo EQ. Since this can even be adjusted channel by channel, one channel can be used for transient shaping while the other simultaneously functions as an EQ. An auto gain function protects against clipping in the classic full range mode.

Hands-on: Top-end layering

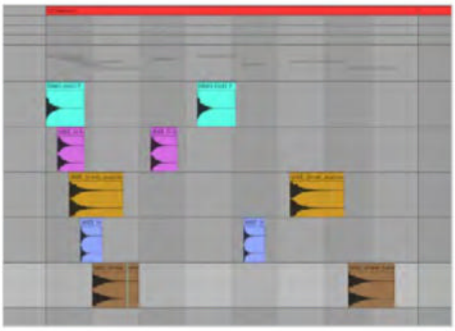
Lack of ideas? Here‘s the trick for a unique top end

You don‘t always get inspired, or you get stuck in the same old patterns and routines – breaking out of them is usually difficult. That‘s why we‘re showing you an alternative way to build hi-hat grooves that you definitely wouldn‘t have thought of on your own (nor would we, by the way). And all it takes is a delay ...



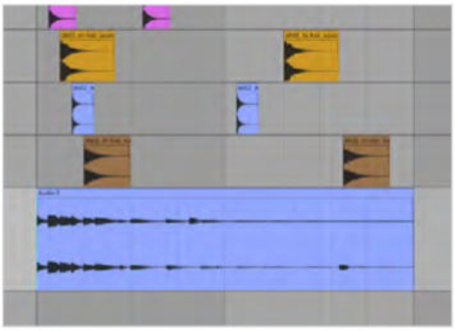
1 Load sounds...

The setup is simple: Load four to six hi-hat sounds onto separate tracks and assign a separate delay to each one. Choose any preset for each track, making sure the delay time is no shorter than 1/8, set dry/wet to 50% everywhere, and turn up the feedback so the echoes can be heard for quite a while.



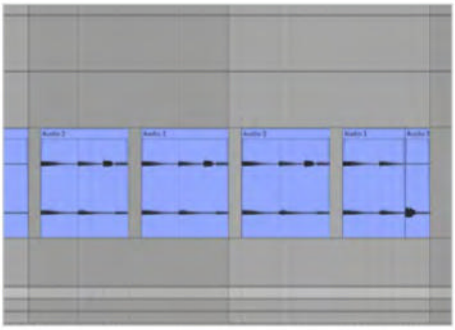
2 ... place

With that, we‘ve already got the basics, but it‘s worth not starting all the sounds at the same time and placing them multiple times on their track—always 1-2 bars apart and at a different timing (for example, not always on the 1st beat). Then group the tracks or route them to a bus track, depending on your DAW.



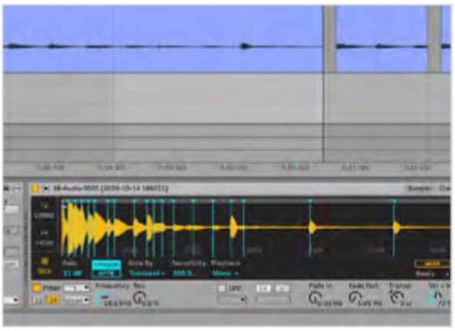
3 ... record

Start playback and record the group‘s output over 8-32 bars on a separate audio track. It might sound quite chaotic at first, but that‘s okay. Once you‘ve finished recording, solo the track, activate the metronome, and listen to the material. Join in at different points and let the groove inspire you.



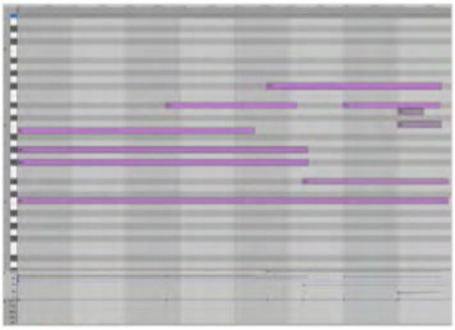
4 Review the recording

Cut out your favorite parts and test them with the beat. Some of them will be relatively quiet; normalize them as needed. If you haven‘t found the perfect loop, arrange several parts in a row to create a new groove. It‘s also worth playing some parts backward here and there.



5 Slicing

If you still haven‘t found the right material or want to experiment further, save the best of the loops you‘ve found for later and load the first one into your sampler of choice that can slice samples and add an arpeggiator to the sampler. This makes it easy to rearrange the loops and play them live on your keyboard.



6 Other samples

This will provide further inspiration. Tip: For straight patterns, hold four or eight keys simultaneously, for syncopated patterns, three or five. If the loops just don‘t work, start over, swap the sounds, and vary the delays. Try different hi-hats, shakers, and even percussion. Basses can be filtered with EQ.

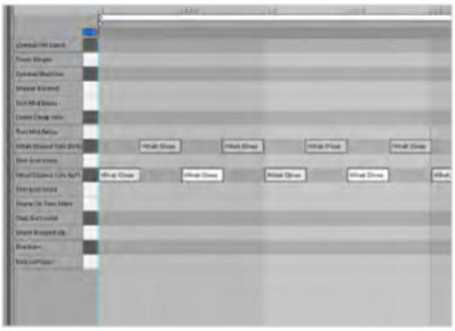
Hands-on: Hi-hats

The (indispensable) final touch

Thanks to our hundreds of MIDI patterns for the top end, you'd never need to do anything yourself again, but a loop doesn't always fit the existing beat right away. And you can always fine-tune the stereo width and the mix anyway. So, for the final touch, the following tips are indispensable ...

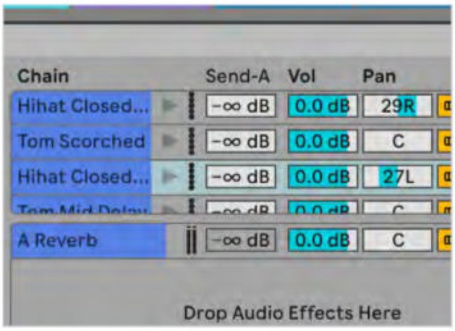
1 Basics

I love shakers, tambourines, and cabasas! That's why I usually program the patterns myself, and it's pretty simple: I create a 16th-note sequence with all notes at half velocity. I then raise all notes at the beginning of the bar to 90 and all off notes to 127. This gives us a typical basic shaker pattern.



2 Secondary sound

However, the shaker and tambourine always consist of a forward and a reverse sound. If that's not available for the sound I'm using, or if I'm using a hi-hat sample anyway, a similar sound will do, or I can duplicate the existing one and play it backward. But first, let's talk about the shaker pattern...

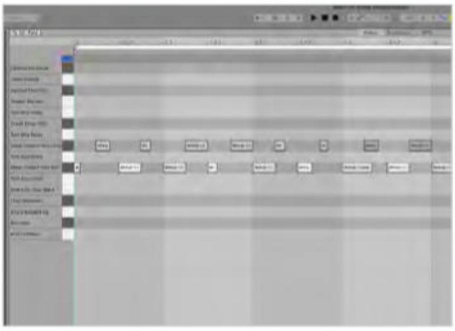


Chain	Send-A	Vol	Pan
Hihat Closed...	-∞ dB	0.0 dB	29R
Tom Scorched	-∞ dB	0.0 dB	C
Hihat Closed...	-∞ dB	0.0 dB	27L
Tom Mid Delay...	-∞ dB	0.0 dB	C
A Reverb	-∞ dB	0.0 dB	C

Drop Audio Effects Here

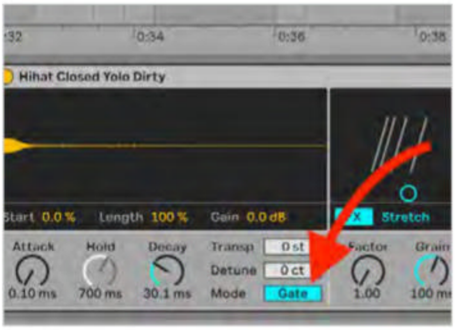
3 Stereo width

From this, I grab every second note (the one with half velocity) and move it to the note on which the second sound is located. I then pan both sounds 50% to the left or right. This makes the pattern sound significantly wider. Another thing I always use and rarely see other producers do is varying note lengths.



4 Note lengths

Drums are usually played as one-shots. I, on the other hand, love playing them with different lengths, as this creates even more groove. You can do this either very deliberately, which works particularly well with shakers and tambourines, or simply randomly shorten notes.

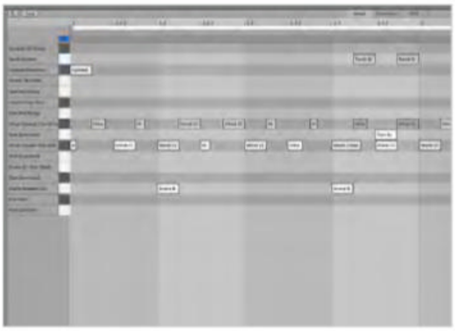


Hihat Closed Yolo Dirty

Start 0.0 %
Length 100 %
Gain 0.0 dB
Stretch
Attack 0.10 ms
Hold 700 ms
Decay 30.1 ms
Transp 0 st
Detune 0 ct
Mode Gate
Factor 1.00
Grain 100 m

5 No one-shot

It's important that the sampler or drum synth you're using isn't set to one-shot, but rather to an envelope with only sustain at full strength, while decay and release are almost at zero. Important: We're not finished here yet, as the pattern is extremely repetitive. So I duplicate it over 4 or 8 bars.



6 Variations

Then I sprinkle in a few other drums and percussion, or switch from a shaker to a tambourine here and there. But all of this really only in moderation, otherwise the pattern becomes too hectic and takes the focus away from other – usually more important – tracks. It's better to use fewer, but perhaps add a delay to one or two sounds instead.

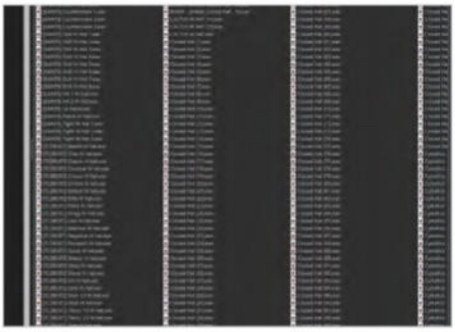
Hands-on: Creating successful hi-hat loops

Ultimate hip-hop hi-hats

The hi-hat is the heart of every drum loop and plays a crucial role in shaping the groove. Whether it‘s fast, succinct patterns with closed hats or relaxed grooves with open hats, small mistakes can ruin a lot. We‘ll show you how to use them perfectly in your mix!

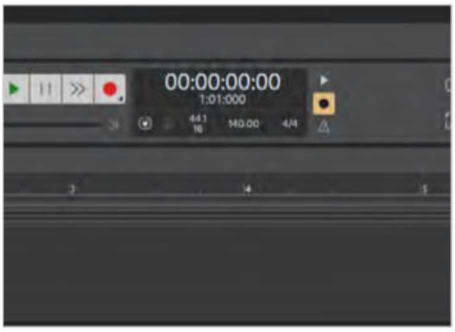
Project info:

Material: Hi-hat one-shot of your choice, iZotope Neutron Pro, Teletronix UADx LA-2A
Time required: 45 minutes
Content: Creating a hip-hop hi-hat loop from scratch
Difficulty: Easy



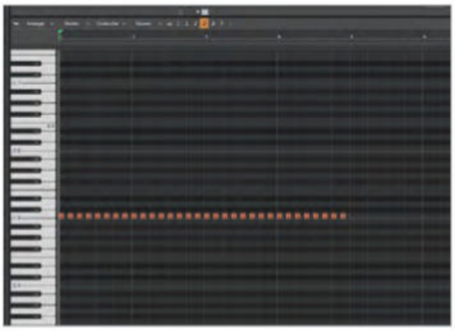
1 Sound selection

The character of your song is crucial when choosing a hi-hat one-shot. Consider the genre you‘re producing and the mood and atmosphere you want to convey. An aggressive trap beat benefits from a powerful hi-hat with plenty of compression, while subtle, soft hi-hats are more suitable for R&B.



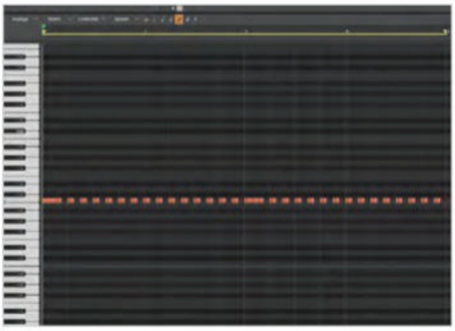
2 Determine the BPM

Next, select the appropriate tempo for your loop. Trap usually ranges between 120 and 160 BPM, but can also work at 90 BPM if the hi-hats are programmed in double time (180 BPM). Boom Bap, on the other hand, is often slower and typically ranges between 80 and 100 BPM. It‘s best to research your genre yourself.



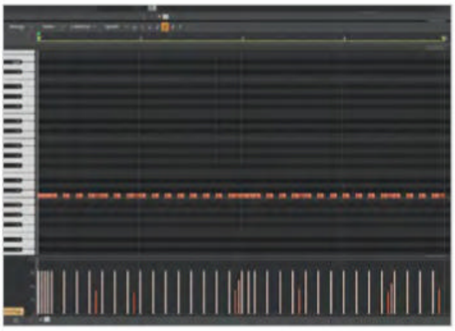
3 Laying the foundation

Once the sound and tempo are established, you can start building your hi-hat loop. For modern trap beats, you usually play the hats in eighth-note time to create fast, driving rhythms. In classic hip-hop, however, this rhythm creates a steady, relaxed, head-noddling groove due to the slower tempo.



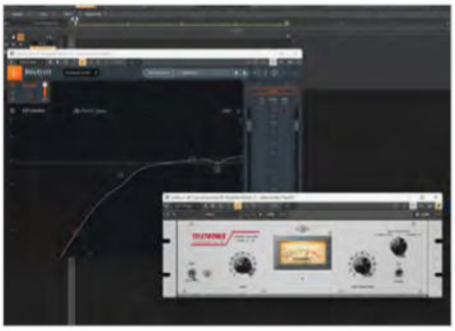
4 Variation with rolls

Now that the foundation is in place, you can add details. A common technique in modern hip-hop is so-called rolls: short hi-hat figures played in 16th-note time for half a beat, meaning four short hits instead of one. Deliberately place these rolls at the beginning or end of the loop to create tension.



5 Ghostnotes

Ghostnotes can enrich the rhythm by placing them on a beat between the regular hi-hats. These are very quiet, barely audible hats that occur just before or after the main beats. They don‘t serve as emphasis, but rather as a subtle filler, giving the groove more depth, movement, and dynamics.



6 Add FX

Finally, an effects chain is recommended to optimally integrate the hi-hats into the mix and perfectly match them to the song. Use EQ and compressor for this: The EQ increases presence and clarity while removing unwanted frequencies. A subtle compressor gives the hi-hat crunch and ensures greater impact in the mix.

This makes drums twice as fun

More than just „drumming“

Are you looking for a bandmate for shows, studio jams, and live performances? Or an ultra-compact drum kit? Or maybe you fancy a proper light show while drumming? The app-configurable MIDI controller and highly successful crowdfunded drumbeam enables all this and a little more. Producers with a penchant for drums should definitely read on...

www.afk-audio.de

Drumbeam is an innovative MIDI controller from Dresden-based company afk-audio that aims to revolutionize playing electronic drums and controlling music software. It‘s essentially a compact, beam-shaped pad with a silicone striking surface, specifically designed to be played with drumsticks.

What sets the drumbeam apart from conventional drum pads or electronic drums is its high-resolution sensor technology. This detects not only how hard you hit the surface, but also where exactly you hit it. The result is a much more expressive and realistic playing experience, allowing you to create smooth transitions or different tonal colors of a drum (e.g., from the center to the rim) on a single surface.

Thanks to its robust aluminum construction and lightweight, compact form, it‘s often referred to as the „backpack drum kit.“ It‘s designed for musicians who need a flexible, portable, and visually appealing instrument for studio sessions, jam sessions, or live performances. The device can also be customized in depth via a web app, from the division of the hitting zones to the illuminated LED feedback.

Special features

- **Continuous Sensoring** (position and pressure sensitivity): Detects not only the force of the strike (velocity), but also the exact position of the strike.
- **Gesture recognition:** In addition to normal strikes, it can also recognize gestures such as „squeezing“ (pressing/squeezing the surface) or „choking“ (muting).
- **Freely configurable interface:** Using a web app, up to 12 individual strike zones can be defined (size, behavior, and MIDI commands sent).
- **Visual feedback via light guides:** Integrated LEDs light up with every strike, providing an impressive visual experience.
- **Compact and robust:** Aluminum housing with a silicone surface, lightweight (approx. 800 g), and fits in any backpack. ⁘

Is happy!
Configured via app.
Changes the drum kit.
Triggers the next loop.
Aftertouch controls delay feedback.

Highlight: Apisonic Labs Speedrum BE

Turbo Drum Sampler w/ 66 Kits

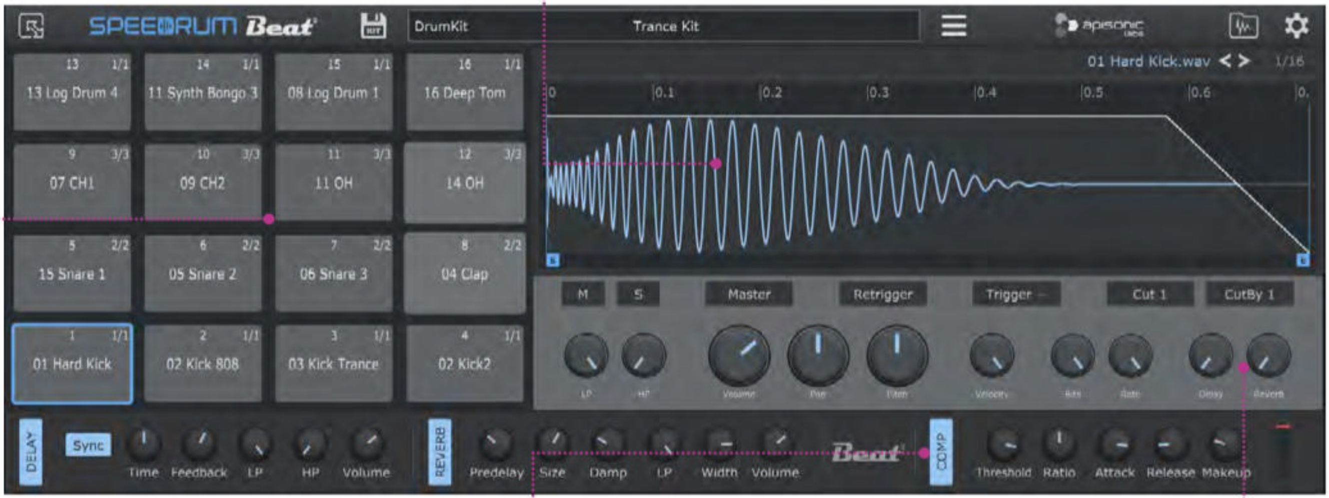
Yay, BEAT finally has a drum sampler again! Apisonic Labs has programmed an exclusive BEAT version of Speedrum for you, featuring 16 MPC-style pads, delay, reverb, bitcrusher and compressor - everything a turbo drum machine needs. And we've taken care of the kits for it, in case you don't want to feed Speedrum BE yourself. There are 66 ready-to-play kits with powerful drum and percussion sounds waiting to be used in your tracks.

Pad matrix
On the left side of the Speedrum BE user interface, you will find the Pad Matrix, where you can load 16 pads with samples. Click on a pad here to edit the corresponding sample in the editor on the right. If you hold down the <Shift> key and click on a pad, it will be muted.

Sample editor
The right side of the drum sampler's user interface is taken up by the Sample Editor. Here, you can adjust the start and end points and fades of the selected sample. Below that, you can mute or solo pads and adjust playback options.

10%

As a Beat reader, you get a 10% discount when you buy the full version of Speedrum. Just use the Discount Code: BEAT10 at apisoniclabs.com.


SPEEDRUM Beat
DrumKit
Trance Kit
apisonic labs
01 Hard Kick.wav
1/16
13 Log Drum 4
11 Synth Bongo 3
08 Log Drum 1
16 Deep Tom
07 CH1
09 CH2
11 OH
14 OH
15 Snare 1
05 Snare 2
06 Snare 3
04 Clap
01 Hard Kick
02 Kick 808
03 Kick Trance
02 Kick2
M
S
Master
Retrigger
Trigger
Cut 1
CutBy 1
LP
HP
Volume
Pan
Pitch
Velocity
Bits
Rate
Delay
Reverb
DELAY
Sync
Time
Feedback
LP
HP
Volume
REVERB
Predelay
Size
Damp
LP
Width
Volume
Beat
COMP
Threshold
Ratio
Attack
Release
Makeup

REGISTRATION & INSTALLATION

The registration of Apisonic Labs Speedrum BE is done - as usual with our software highlights - via our www.serialcenter.de. After registering the data from the current Beat issue, you will receive an e-mail containing the password for the archive with the installation files in various formats, as well as instructions for installation.

Global effects
Speedrum's **Delay, Reverb** and **Compressor** effects work on the entire kit. With the Compressor you can easily glue all drum and percussion samples of a kit together sonically.

Customize sound
A quick adjustment of the sound is possible with the highpass and lowpass filters. To the right, you can adjust the Level, Pan, and Pitch of the selected sample. If you turn up the **Velocity**, you can play the samples velocity-sensitively. Want some gritty LoFi drums? No problem with the bit and sample rate reduction controls. Finally, the Delay and Reverb controls determine the signal portion of the two send effects.

More info:
Info at: www.apisoniclabs.com
License & Password: www.serialcenter.de

In the spotlight: Nord Drum

Despite – or perhaps because of – its relatively minimal features, the Nord Drum has a loyal and loyal fan base, making this six-voice drum synth a kind of „hidden gem.“ What‘s special about the Nord Drum is that its sounds aren‘t based on samples, but rather generated via synthesis. In our opinion, the possibilities of this powerful sound generation with its 6-way multimode, whose sounds can also be played tonally via MIDI like a normal mono synth, are often underestimated.

1 | Digital drum synth

All six sounds of the Nord Drum are identical, with sound generation based on three components. The most comprehensive section, besides Noise and Click, is Tone. Here, the Nord Drum presents itself as a true synthesizer. The Resonant modes, with their complex sound spectra, recreate the sound characteristics of drumheads, marimbas, vibraphones, metal reeds, and cymbals, while the FM Synthesis mode, with four FM algorithms of varying complexity, delivers crystal-clear and bone-dry sounds.

2 | Integrated effects

The Nord Drum 3P features both a reverb effect and a full-fledged delay. The reverb lets you choose between different reverb algorithms, with small and large room effects, as well as natural and artificial-sounding room effects. There are also two insert effects with EQ and distortion per channel.

nord drum 3P

570 MB
Nord Drum Sample bonus pack in the magazine downloads!

www.nordkeyboards.com

3 | Pads with excellent feel

Along with the sound generation, the six pads are an essential part of the Nord Drum 3P‘s design. The feel and dynamics are excellent, and crosstalk between the pads is undetectable, even when playing vigorously. Conclusion: The Nord Drum 3P is a no-brainer for drummers who want to explore the world of drumming outside of acoustic kits.

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With depth: Must-knows for acoustic drums

This is how impressive drum recordings are possible!

It is clear that a suitable beat drives the track forward. Depending on the idea and the way of working, drum machines and MPCs are available, which either pull their sounds from an internal memory or from the hard drive. However, acoustic percussion instruments that you have recorded yourself have a special charm. The effort for this is of course higher, but as a reward there are not only absolutely unique results, the workflow also „turns“ in an exciting direction! What you need for this and which procedures lead to good results, we have put together for you in the following comprehensive tutorial.

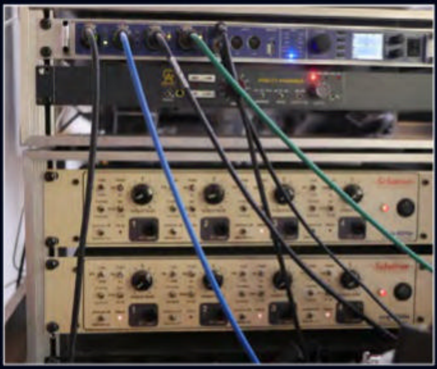
Let‘s go straight to the point: An absolute low budget solution for recording acoustic instruments would be to simply use the computer, smartphone or tablet and press „Record“ in a corresponding app. This saves you a lot of effort and costs, because the internally built-in microphones and converters do all the work. It’s a fact that certain parts of large productions are actually created in this way. Lo-Fi is a popular “spice” for many producers, the contrast can make the song really exciting. So can we skip the rest of this special? No, because our goal is to record high quality percussive signals and to be able to process multiple tracks separately.

Audio interface with enough preamps

If you don‘t have one yet, you first need a suitable audio interface. When selecting the device, the general question arises as to how many microphones you would like to record at the same time. For a complete set of drums, we recommend models with at least four, or better still eight, built-in microphone preamps.

Audio interfaces for drum recording require a sufficient number of microphone preamps.

Caution: Caution: Manufacturers often state the maximum number of possible channels in their product descriptions. However, we are interested in the actual XLR sockets for connecting microphones. However, if you are primarily interested in recording individual drum tracks, one or two free preamps are sufficient.



External preamps, like these Sebatron tube models, aren‘t necessary at the beginning.

Let‘s start: The choice of microphones

In order to record snare drums and toms appropriately, dynamic instrument mics that can process high sound pressure levels (SPL: sound pressure level) have proven their worth. A classic here is certainly the Shure SM57, which has been used for this task by producers of all styles for several decades. However, almost all manufacturers offer alternatives that are just as suitable.

Bass drums: While snare drum and tom mics are usually versatile instrument mics that tend to have linear frequency responses, drummers and producers like to use transducers for bass drums that have been optimized by the manufacturer for this specific purpose. Models like the Sennheiser e902 or Audix D6 have frequency responses that have been reduced in the midrange frequencies, emphasizing the attack and low end of the drum and requiring less processing in the mix. Not absolutely necessary, but an often welcome addition to the regular bass drum mic are so-called subkick mics, which - placed in front of the bass drum‘s resonance head - capture the very low frequencies of the drum. Technically, these are polarized loudspeakers whose mass inertia suits the task. But vocal microphones are also often used in this position.

Overhead microphones

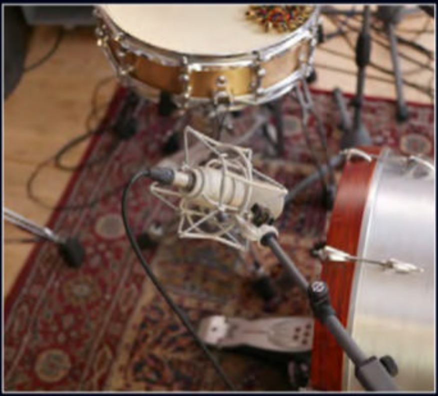
In many setups, the overhead mics are responsible for imaging the entire drum kit, but some see them primarily as cymbal mics. The most common type for this application is probably the condenser microphone. Whether these are small-diaphragm condenser mics in rod form or large-diaphragm mics is a matter of taste. Ribbon microphones have also proven effective for a softer, treble-reduced sound. It doesn‘t have to be expensive classics such as the Coles 4038, even with very cheap models you can produce fat-sounding drum recordings.

Room and “dirt” microphones

Although not absolutely necessary, for many drummers the fun really begins with room mics. The type is of secondary importance here, because the task of the room microphone is to deliver a signal that can be properly „pumped up“ in the mix using a compressor. “Dirt” microphones have a similar function. They are positioned at certain points in the kit in order to generate more grip and/or tonal tension.

Two stick condenser microphones, a bass drum microphone, and a snare drum microphone: This basic setup allows for excellent recordings.

Dynamic instrument microphones like this Electro-Voice ND468 are true all-rounders and can withstand high sound pressure levels.



Microphones in this position are often called dirt mics or „sausages.“ Here you see an American ribbon model called the Shinybox MX46C.

Good cables make life easier

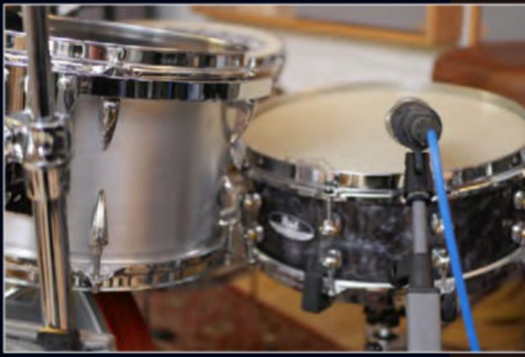
Cables may not be that sexy, but without them it stays silent. In addition, the right cables makes life a lot easier, especially when it comes to drum recording. It starts with the appropriate lengths, which should be chosen so that all possible positioning options can be implemented without coming to cable limits or producing trip hazards. The quality is also important, because nothing is more annoying than having to check whether the cable is the problem. In our recording studio we mainly use CPM FM cables from Cordial, which with their good shielding and precise Neutrik plugs make my daily work easier and at the same time last a long time. The possibility of getting the cables in different colors is also very practical, so you can see at a glance which microphone signal is running in which interface input.

Positioning the microphones

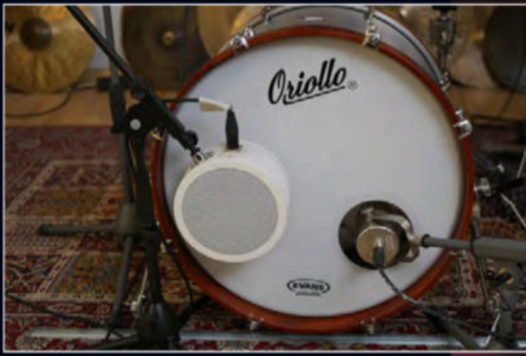
In most cases, the miking of drums and cymbals is made up of so-called close mics and distant mics. As the name suggests, the close mics are positioned close to the respective drums and cymbals. Optimally, they should only pick up the instrument they are aimed at, the bleed from other instruments in the drum set and also room components should be minimized. This allows the sound of individual instruments in the drums to be precisely shaped later in the mix. Our recommendation is to position the microphones about two fingers wide over the hoops of the snare and/or toms and to align the axis about the center of the head. There the attack is most pronounced, harmonics are picked up less strongly in relation. With bass drums, the microphone is in most cases positioned in the drum or in front of the resonance head. The following applies here: The closer the microphone capsule is to the point of impact, the more attack the signal will have.

The 0.22 mm² copper conductor of the Cordial CPM FM cables delivers dynamic sound at an affordable price.

It looks completely different with overheads and room microphones. Due to their greater distance, they naturally pick up a much larger area of the drum kit and significantly more spatial components. You should keep this in mind when setting up, because subsequent, targeted interventions in parts of the signal (for example, the snare drum) are much more difficult to accomplish. In order to achieve a good balance when recording, it is important that both overhead mics have the same distance from the snare drum. We have found a distance to the center of the drumhead of 90 to 100 centimeters to be good. If the sound is more “tight” and not very spatial, you are of course welcome to experiment with less distance. An open, wider sound, on the other hand, is created by higher positioned overheads.



Close miking involves positioning the microphone close to the source, here a snare drum.



The right microphone is the main mic, the white one a so-called „subkick“ for the very low frequencies.

Overhead mics are meant to capture the entire kit, but primarily cymbals and hi-hats.

The room plays along: The acoustics

Recording real percussion instruments is often referred to in the scene as the royal class of recording. The reason for this is obvious. Because unlike almost all other sound sources, the drum set covers an extremely wide frequency and dynamic range. Both factors bring the acoustics of the respective room to the fore. Large studios for live music therefore have sound-optimized rooms with different, coordinated acoustic elements such as absorbers, bass traps and diffusers.

Bass traps in all corners of the room have an immediately audible effect, because they eliminate the typical „rehearsal room rumble“, which is caused by bass and midrange „piling up“ in the corners and making the recording intransparent and muddy. Here we are talking in particular about the frequency range between around 150 and 500 Hz. Depending on the budget and sound concept, additional bass traps can also be positioned close to the drum set in order to eliminate the development of these interference frequencies directly at the source. The drier the (bass) sound is to become, the more heavy absorbers such as the aforementioned HOFA acoustic bass traps are recommended.

Smaller broadband absorbers, which can be fixed to walls and ceilings, are further measures to reduce disruptive reverberation. Here, too, the spatial positioning close to the sound source ensures that interfering highs and mids are quickly controlled and cannot build up into so-called room modes. Snare drums, hihats and cymbals benefit particularly from this, resulting in a more grippy sound and a natural relationship between attack noise and decay.

Diffusers

To refine the sound and also to give the drum room a bit more liveliness, diffusers can also be installed. Instead of swallowing sound waves and converting them into heat (as absorbers do), they ensure that the sound waves are dispersed and thus prevent unpleasant bundling of the upper mids and highs.

HOFA BassTraps are placed in the corners specifically to absorb bass. Two elements can be combined for frequencies below 80 Hz.

We do not want to conceal the fact that such elements, especially in the sum, have their price. For all those who want to record acoustic instruments on a regular basis, investing in such measures is definitely recommended. One advantage of the modular design of the HOFA acoustic elements is that not all parts have to be bought at the same time, nor should they. Especially when the tonal neutrality of a mixing or mastering room does not have to be achieved, but a pleasant, inspiring tracking room is the goal. This leaves time to get used to the change and to gradually optimize the space.

In addition, it is worth experimenting with the position of the drums in your room to find the "sweet spot", the point at which the recorded results sound best. Large rooms with high ceilings are advantageous for recording drums, but a smaller room can also be used depending on the sound you want. Most of us are tied to our rooms, so it is important to make the best of it.

Drum and cymbal selection

The main percussive elements of most tracks are the snare, kick drum, and hi-hat. It gets a little more difficult when it comes to which exact models and sizes fit best. In view of the enormous selection, we limit ourselves to one tip: Take what is available at the beginning, because exciting sounds can be generated from almost all functional instruments. If nothing is available yet, the favorites would be a 20-inch bass drum, a standard 14x5-inch snare and a hi-hat. When it comes to cymbals, we recommend quieter, dry sounds for recording. Especially in smaller rooms, thick cymbals with more volume and higher pitch can become a problem, because their sound then quickly overlaps the rest. Furthermore, long decay is also often not compatible with stronger compression. More on that later in the mix section. Many drummers today use kits with two to three toms, which is enough for most tracks.

Diffusers – like the one pictured here from HOFA – absorb only a portion of the sound waves, allowing for controlled dispersion.

Good for recording: Here you see a selection of rather dark and quiet-sounding cymbals.

Big drum kits with lots of drums and cymbals look cool, of course, but be more careful to only build what is needed in the respective song. There are two reasons. The first is of a tonal nature, because percussion instruments tend to vibrate softly, even if they are not hit directly. So if you need a tight beat that needs to be properly compressed in the mix, background noise would make the work much more difficult. The second reason for reducing it to the essentials is a playful one. After all, what hangs on the drum kit is what you want to use. However, this often leads to the fact that the beat is supplemented here and there with playful add-ons that you don‘t want to have in later.

Tuning basics and sound hacks

The subject of drum tuning often occupies drummers at least as intensively as the actual playing, because drums have the property of producing a whole cascade of overtones that do not always sound as desired. With whining decay, uncontrolled rustling of the wires and slack sounding bass drums, most are confronted at some point. We would like to introduce you to two good tuning approaches that have proven themselves in many situations: We always tighten the tuning screws on the resonance head of the snare drum extremely tightly. Although this skin is very thin, it can withstand extreme tension and can therefore do its job best. This includes not letting the sound of the snare become too long and - very importantly - offering the snare carpet the most concrete possible contact surface.

You should adjust the wires in such a way that they respond when you touch the batter head with your finger and that there is a concrete, integrated rustling component when you play with the stick. If it is too tight, the snare drum sounds hard and stifled, adjusted too loosely, the sound separates from the kettle tone and rustles for too long. We tune the batter head depending on the song, if it is to be funky and dry, we tighten the tuning screws

Big impact for comparatively little money: Different beaters provide additional sound options.

firmly, for a „wet“ disco or 70s sound the head remains very soft. The rule of thumb for all heads on the set, however, is that even tension on all tuning screws is always a good starting point.

Another tuning tip

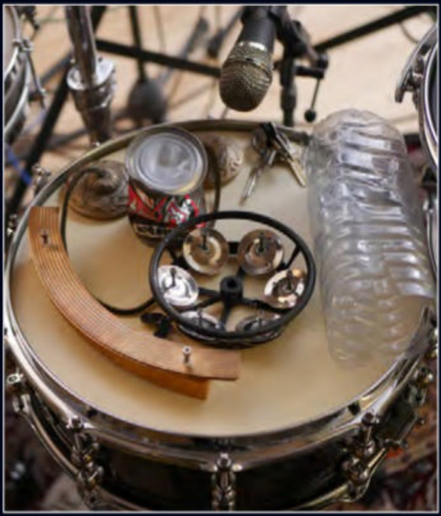
The second tuning tip concerns the sustain control of the bass drum. Their large areas of skin can often drive beginners to despair, because it is sometimes difficult to hear which overtones fit and which don‘t. The rule here is: what sounds exciting is good. To start, use a front head with a hole that is large enough to quickly place damping material such as small cushions or blankets in the shell. It is best to use some damping first and get a feel for the sound of the drum. Just as important as the decay of the bass drum is its attack. A hard bass drum beater, for example made of wood or plastic, provides more kick and punch, soft models made of lambskin create a soft, „boomy“ sound.

Creative dampening and modification of the instruments

In its natural state, a correctly tuned drum produces a striking sound (attack), followed by a more or less long lasting decay (sustain or decay). The relationship between the two parts of the sound determines whether a drum is perceived as dry and percussive or open and tonal. The latter characteristic is especially appreciated in acoustic music styles such as jazz, but in other scenarios longer-sounding drums may be a problem. Either because they take up too much space in the music or because their tonality does not match the key of the track. In recent years the trend has been moving in a drier, controlled direction, not least because such sounds can be processed much better and inserted into electronically dominated song contexts.

In addition to the drums and cymbals, we use a large arsenal of parts with which the sound of the instruments can be quickly changed and adapted. We distinguish between two categories: One is damping; The aim here is to limit the natural skin vibration so that the length of the drum sound matches the taste and/or the song. Our drummer hasn‘t played a single production in the last ten years that didn‘t use at least a bit of dampening. Of course there are many ready-made products to buy in specialist shops, but we often simply use soft pieces of fabric, gaffa tape or old, cut-out skins. The larger the dampened skin area, the more limited the decay. Often these short sounds are also the “most microphone-friendly”, because they deliver a short impulse that can be shaped as desired in the mix. In addition, fewer harmonics mean less crosstalk into other microphones.

The second category of things that can be placed on drums on the one hand take away overtones, but at the same time add sound textures. These include, for example, metal parts such as (sink) chains, all kinds of bells percussion, key rings, screws and actually everything that can be accommodated on the skin.



This is proven: The possibilities for creative modification are almost endless.

On this snare drum, ankle bells provide additional „sizzle“ at the end.

Very effective: the percussion tools!

Drums are played with sticks, maybe there are still brooms in jazz, the classics use mallets? Those who see things this way are depriving themselves of an enormous palette of possible sounds, which are also very inexpensive to implement and at the same time make mixing easier. Especially for those of you who want to build a small arsenal of your own oneshots without investing a lot of money in drums, experimenting in this field is worthwhile. As already mentioned above, the sound of drums is made up of the relationship between attack and decay. Hard hitting tools like sticks emphasize the attack, while soft ones like mallets (felt or wool sticks) represent the other end of the spectrum and focus on the sustain. Brooms and so-called rods (made of bundled wooden or plastic sticks) in turn add an airy character because the attack is split up into many individual events. But who says that we, as creative sound hobbyists, are only dependent on the products in the music store? Plastic tubes from the hardware store, whisks (great on ride cymbals), pens, fly swatters and many more oddities can be used as part of sound production and often lead to great sounding, unique results.

Big effect for comparatively little money: Different beaters provide additional sound options.

> »The rules can (and should) be broken for exciting, unique drum sounds.«

The most important thing in drum recording: the sound in your head!

Drum recording should be a creative matter! One of the most important, if not the most important, requirements for a successful recording, however, is a rough idea of what the end result should sound like because many of the steps that are taken during the process are based on this. We would therefore like to accompany you through a recording session, at the end of which there are two beats: One with an open-sounding, powerful bass drum, a high, dry snare drum with a bit of „sizzle“ on top and a compact, defined-sounding hi-hat. The second beat is characterized by an ultra-fat “disco-style” snare drum, a short, attack-heavy bass drum and a slightly wider, “crispier” hihat. The beat is loosened up by two dry dampened toms and a so-called clap stack made of curved cymbals, which is supposed to imitate an 808 clap.

Soundcheck

After you‘ve miked the drums, it‘s time for the soundcheck. Since we do not have a sound engineer or separate recording and control rooms, there are two options for acoustic control. One is to record something, then listen to it and make any adjustments to the microphone position. For the other, it is recommended to use a strongly closed headphone that lets only a little of what is played through. Now it‘s time to set the microphone level. Unlike in the past, where it was important to get the maximum level already on the tape, we can be very cautious in the digital world today. Digital clipping should be avoided at all costs, and signals that are set too “hot” hardly leave any volume reserves during processing. A good value for all tracks is therefore approximately -16 to -12 dB. Your (interface) software usually gives good visual indicators. If the signals are constantly in the red area, it is time to move the gain control counter-clockwise.

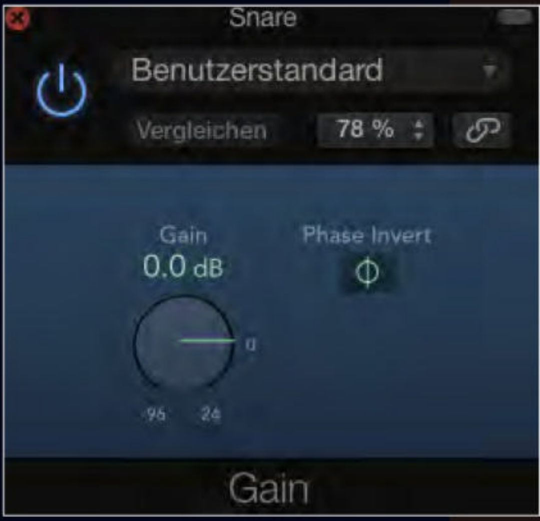
The mix - step 1: „Clean up“ and check phases

After recording, we have the recorded tracks in their raw form, with everything that the microphones have recorded. For a punchy drum mix, however, this can cause problems, as signals from more than one microphone can overlap and/or cancel each other out. The first step for all my mixes is therefore to load parametric equalizers in all tracks (every DAW has) and to filter out the frequency components that are not required using low cut and high cut. On the snare drum and the overheads, for example, we only very rarely need frequencies below 80 Hz, especially when the toms have their own closemics, which then contribute the bass if necessary. In our two sample beats, for example, I used a subkick mic in front of the bass drum to provide the low end. So that they don‘t get in the way of the signal from the main bass drum mic, I high-cut everything above 200 Hz on the subkick, and the main mic gets a low cut below 70 Hz. The exact frequencies vary, of course, depending on the tuning, microphones and positions, but in the end your ears always decide. There can be no fixed rules here.

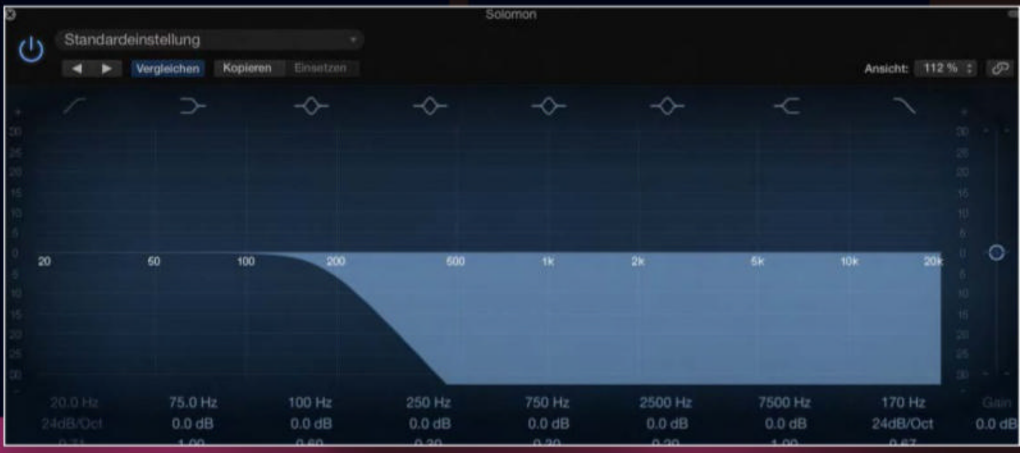
Next we come to a very important point that many beginners ignore and thereby ruin their recordings. We are talking about phase control. For example, if the sound wave from the snare drum hits a single microphone, we don‘t have to worry. However, if - as with the drum set - other microphones are responsible for imaging the drum, the sound waves are more likely to arrive at them with a time delay. In a good 50% of the cases, parts of the sound are canceled out, which makes the drum sound thin and hollow. The same goes for the toms and the kick drum. We would therefore claim that one of the most important plugins is the phase switch. In order to check “what phase is”, you should listen to all tracks at the same time and then operate the phase reverse switch in the channel strip of the corresponding drum. If the tone becomes thicker and more punchy, the phase has been reversed and you have successfully resolved the problem.

After you have implemented these first steps, the result should sound a little more focused, punchier and more transparent than the unedited raw version. Maybe a little quieter (you have removed frequency components after all).

The mix - step 2: basic mixing and panning



So far you have heard your tracks in mono, some instruments may seem too present to you. Therefore, we now move on to the distribution of the tracks in the stereo image and a basic mix. The panning of the two overhead mics has the greatest effect. A hard right-left distribution opens the sound to the sides and ensures a clear stereo impression. Whether you take the drummer or audience perspective is a matter of taste. However, you should decide on a variant, because at the latest when elements such as the toms are added, the image should be coherent. Traditionally, the main parts of the beat like the snare and kick drum are left in the middle. But here too, exceptions prove the rule. Now, for the mix, let‘s briefly recall the part about the close and distant mics. If you want a tight, drum-focused overall sound with more attack, it is advisable to turn the overhead faders back a little. If you want the set to sound more spatial and natural, you can cancel the close-mic signals. A common misunderstanding is the idea that all instruments in the set can be heard at the same volume. That may be correct when it comes to documenting what has been played. However, this concept is not suitable as a creative template. Do you always have to hear the hi-hat or does the track only really open when you just feel it and instead give the snare or the bass drum maximum space? These decisions are very important, so beginners should take their time to get a feel for them.



Generous frequency removal can be useful, as in this case with the hi-cut on the subkick mic.

> »The most important thing in drum recording is the sound in your head!«

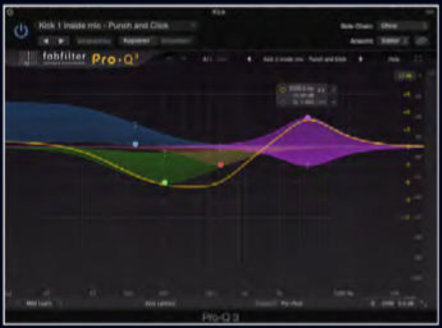
The mix - step 3: compression, reverb, gates, stereo sum

The last step in the mix is often the most fun, because now it‘s time to „pump up“ and add textures that make the result exciting and unique. An excellent tool for this is the compressor. Every DAW comes with a corresponding plug-in and we actually recommend presets to get you started. The advantage is that they are very suitable as a starting point and you can quickly hear and see what effect the device is developing. We basically use compressors on drums for two things, namely shortening or widening a (single) sound and for harmonizing the beats played. A compressor can also act like a kind of “glue” on the stereo sum, joining all the elements together. Standard compressors usually have four major controls. The „Threshold“ determines the signal volume from which the device starts working. Then the “Attack” control determines how fast it grabs, while “Ratio” states how strong the compression will be. The “Release” button is used to set when the compressor “releases” the signal again. If you don‘t have any experience with compressors on acoustic drums, I recommend the aforementioned presets as a listening guide. Very revealing for the learning process is also the procedure of listening to the compressor on the stereo sum with extreme settings, for example with a „Room“ preset. Also fun are compressor plug-ins whose operation is condensed into a few knobs and whose purpose is not to work analytically, but rather to encourage intuitive decision-making (example: Soundtoys Devil-Loc).

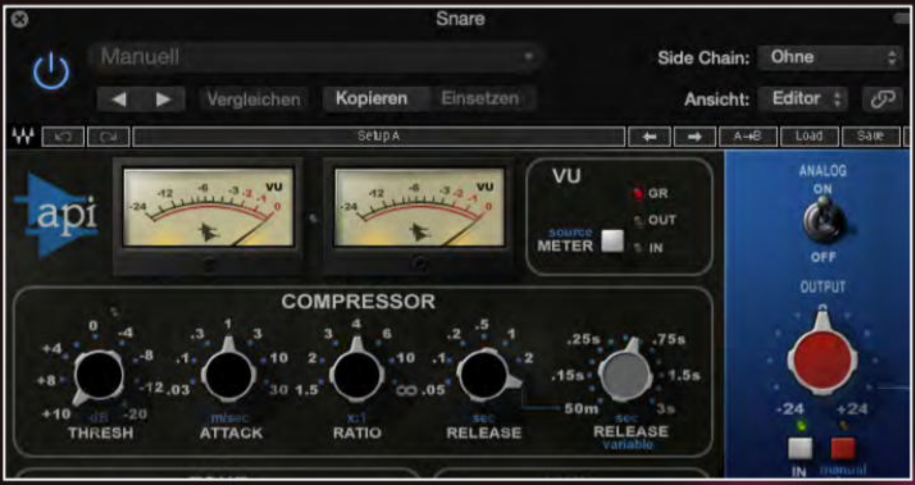
When compressing individual tracks, it is important to ensure that crosstalk does not become too prominent. Depending on the signal source, gates can help here. To do this, first listen to the relevant track solo. If, for example, it is a constantly played snare drum backbeat with no extra soft notes (ghost notes), a gate can isolate the hits and free them from crosstalk between the hi-hats. After that, you can really step on the gas with compressors, because they then only affect the desired sound events (in this case, the snare). The result can be very clear, punchy sounds. In the two sample beats, we used this technique on both snares and bass drums to reinforce the slightly electronic touch. But gates shouldn‘t be obviously audible in the end result, so be careful here. On tracks with longer decaying sounds, such as cymbals, they stop the fading abruptly, which only sounds really good in very few cases.

With reverb plug-ins you can give your signals a sonic dimension. The more different you process your individual instruments, the more artificial the result will sound.

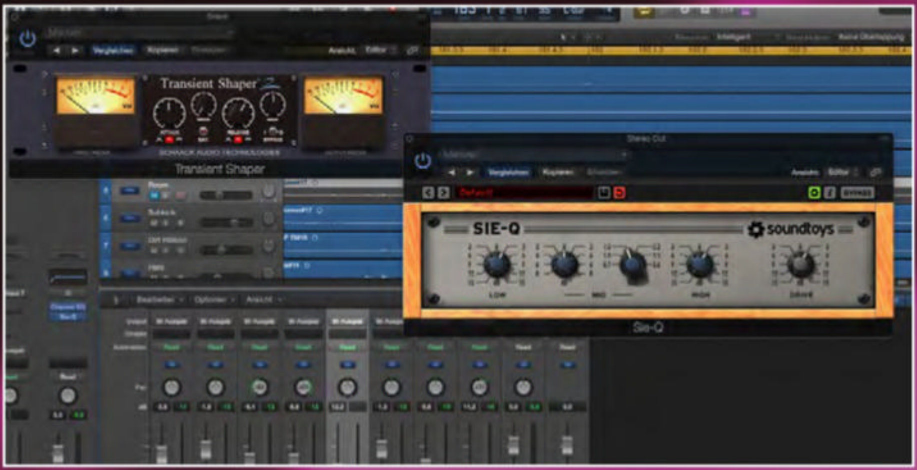
A reverberant snare drum in combination with dust-dry toms will have a more electronic sound aesthetic, since after all it is physically difficult to create such a sound behavior in reality. On the other hand, if you put the reverb plug-in on the stereo mix, all instruments will be “placed” in the same room, and your beat will sound more natural and realistic. The following applies here: Too much reverb blurs the sound; it is generally advisable to only use this effect in just audible doses. ⁘



Presets can make things easier when starting out and often lead to good results quickly, even for professionals.



One of the most important plugins for drums: the compressor.



The Transient Designer serves to „broaden“ the snare sound, while the EQ provides a bit more contour on the stereo mix.

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Discovered: Siselabonga

Choose Empowerment!

Amapiano, Kwaito, Gqom – African electronic music is finally getting the attention it deserves. Siselabonga are part of this movement, combining warm rolling basslines, MPC-inspired drums, utopian synthesizers, and vocals that oscillate between coolness and ecstasy. We spoke with Nongoma Ndlovu and Fabio Meier and their producer Yannik Sandhofer about how they developed this unique sound for their current album “Halo‘s Glitter” in the studio.

Interview: Tobias Fischer

» We had 16 microphones. One in another room. «

***Beat /** I really feel like the songwriting, which was already excellent on your In Stone EP, took a quantum leap on „Halo‘s Glitter“. It sounds like the result of artists with a lifetime of experience?*

Nongoma Ndlovu / I‘ve been in the music industry for 25 years, from singing melodies to writing songs and developing the soundscape/production. I started working on Logic and Cubase around 2001, but the first song I wrote was already at age 4 - an Ode to Mom and Dad. I started a girlband between the ages of 11-15, and we used to have writing workshops/bootcamps over a span of a month to come up with content for a performance repertoire. Also, my name Nongoma means “mother of song / music” in Isizulu, my mother tongue. So that was pretty much a prophecy of what I was brought here on earth to do. My mom performed while pregnant with me, so music is literally the tapestry of my soul and my entire being.

***Beat /** So there was already some material to work with for Siselabonga?*

Nongoma Ndlovu / Yes, some of the songs I had already sitting in my creative vault for some time but waited for the right time for them to flow. Working with Fabio has been creatively effortless which also allowed the songs to find form and solid ground where the lyrical backdrop is concerned.

***Beat /** I understand parts of the album were recorded in an interesting location?*

Fabio Meier / We recorded the drums in a former bank building in Zurich which is currently temporarily used by artists. Yannik Sandhofer, who recorded, mixed and co-produced the album, has his studio there. **Yannik Sandhofer /** The room sound is nothing special, but reasonably dry, and the atmosphere is great, as there is a lot of daylight, a balcony and a view. We recorded the vocals in my literal bedroom, with me putting up an additional mattress and putting the mic(s) in the right spot.

***Beat /** The drums seem particularly pertinent to the creative process?*

Nongoma Ndlovu / I‘d usually let the drums guide the song. I use a Roland JD-Xi keyboard. It gives you a four bar sequence option to create beats. Usually the rhythms would actually be kind of accidental, because the bank itself has certain designs. So most of the beats that I made from a drum perspective were actually mistakes. Then I‘d just work around that with effects—because it also has effects knobs, delay and reverb.

***Beat /** So it seems there are different layers to the unique sound of the drums on „Halo‘s Glitter“?*

Yannik Sandhofer / The unique sound of the drum comes from the kit that Fabio built, the sticks he is using, and the way he plays. The cajon as a bass drum makes for a lighter and higher bass drum than most drum kits have - a bit in the direction of old-school hip-hop bassdrums or 90s electronic bassdrums. Or something new all-together. The three bells played with brushes, spaghetti-sticks or bamboo sticks sound almost like hihats from electronic drum-machines, and his brushing-technique on the calabash sounds like a mix of forward and reversed samples. **Fabio Meier /** Since I‘m a 90s kid I think my rhythmic standard is very much influenced by MPCs. Which means my perception of time is not 100% “natural,” it‘s biased by a quantised norm. But by listening to a lot of un-quantized music as well, I try to cultivate both and everything in between. **Yannik Sandhofer /** There are a lot of references to electronic drum production, but in the end it is all played by real person, in a real room, on acoustic instruments.

***Beat /** And then, I suppose, you close-miced his set?*

Yannik Sandhofer / I used close mics on every single sound, to be able to shape the sounds as freely as possible afterwards, and to have good transients of

Siselabonga‘s sonic world takes its audience on a deep trip encompassing club music, afropop, and experimental electronica.

all elements. At the same time I put up a few mics for the whole drumkit, to glue the sound together, and to experiment with additional sound shenanigans.

Fabio Meier / We had like 16 mics. One in another room. The one you hear on “Halo” in the synth solo part. There is like a “second” drumset appearing.

Beat / How much of what we‘re hearing is the raw sound, how much was processed?

Fabio Meier / We ran most of the mics through some SSL Pro Drive Octo Preamps and then into an Antelope Zen Interface into Ableton.

Yannik Sandhofer / Except for one section of one songs, on the whole album there was no sample layering done on the drums. Rather, I used the spirit of sample layering on the microphone signals, for example aggressively gating the bassdrum to get a clicky attack sound or first gating, then distorting the snare drum to get more harmonics, or using a frequency-shifter only on the snare reverb. Depending on the song I put distortion and/or reverb/room on the kit mics or used them without additional effects.

Fabio Meier / There are a few parts where we sliced the live recording up and made loops, but most of it is live. While recording “September (Rainy Daze)” we had an amp running through a snare with the Vocoder signal of Nongoma to mix it to the sauce. I remember also using the plugin Sketch Cassette on “September (Rainy Daze)” both on drums and vocals. And on “Agolo” you hear a phaser on the drums.

Beat / The synth palette on the album is both colourful and minimal.

Fabio Meier / That‘s because nearly all the synth parts you hear on the album are from a Roland JD-XI. Tweaked for sure. Most of the songs in their first demo version were made by Nongoma on the JD-Xi. Percussion, bass, pad, lead, and vocals on top.

Nongoma Ndlovu / When it comes to the vox pad, I’m very drawn to chorus and flanger. I like the echoey, reverberated chamber kind of sound. It has an 80s element. I mean, I’m an 80s baby.

Fabio Meier / The JD-Xi also has a built-in vocoder. So one day in 2024 we are in my studio working on “September (Rainy Daze)” and the piano melody part didn’t feel right yet. We were experimenting with different sounds. Then the idea of the vocoder popped up and the thing vibrated immediately. Most of the synth part we already recorded back in my studio as part of the demo process. Which got then tweaked at the studio.

Beat / How did you tweak them in the studio, Yannik?

Yannik Sandhofer / I reamped most of the synth sounds through a Fender Twin Reverb and a Roland JC-120 Jazz Chorus guitar amp, and mixed that with the original in order to achieve a more organic sound, that has more life to it. I also layered the original with additional synths to have a thicker, wider and more three-dimensional sound, and sometimes to shape and change the synthscape over the course of the song.

Beat / Before we talk about vocal production, can you tell me a bit about your lyrical inspirations, Nongoma?

Nongoma Ndlovu / Topics I keep coming back to include introspection,self -awareness, inspiration, motivation and love to name a few. My biggest mandate is always to write music that elevates in some form of a way. I think the conviction in an artist‘s voice, time and passion undeniably has a spiritual pull on anyone listening to the music regardless of - but especially if - the song has a strong message.

Beat / Which artists, for you, had that conviction?

Nongoma Ndlovu / Michael Jackson definitely had a huge impact on me energetically because I feel like he was one of - if not the only - artist that was able to merge the dynamic power of pop and social commentary in a way that inspired people across generations. Miriam Makeba‘s music transcendentally moved me in the sense that she also made me feel seen as someone that lived in the diaspora - and I‘m a diasporan child. Her ability to reflect the times from a Southern African context during the very painfully complex time of Apartheid and her courage inspired me extremely.

Beat / I think you can hear this in the way the vocals sound on the record: Really naked on the one hand, but really powerful and passionate on the other?

Fabio Meier / We recorded the vocals in Yannik Sandhofer’s bed room. Nongoma sang in a set up of three mics which run through analog preamps and Universal Audio Apollo Twin X.

Yannik Sandhofer / Which is a bit unusual ...

Fabio Meier / ... but made sense because this allowed us to distinguish between lead, backings and adlibs.

Yannik Sandhofer / The main microphone was a Stam Audio SA800 - a Sony C-800G clone - that worked fantastically with Nongoma‘s voice. Additionally, there was an Audio-Technica AE3000 at the same distance that I used for some of the vocal doubles. As it has a very different frequency response than the SA800, this results in a thicker and denser vocal sound. The third mic was a Stam Audio 47 FET (U47 FET clone) that I put one meter further away from the other two mics. I used this microphone for the reverb and delays. Due to the additional distance, the highs are less sharp and obviously there is more room and space to the signal already.

Fabio Meier / As you can hear some of the vocals run through a Boss VE-20 using a flanger, chorus or harmonies. Some songs were in their first version created on the Boss VE-20 used as a loop station.

Beat / Paul Simon said “the way that I listen to my own records is not for the chords or the lyrics - my first impression is of the overall sound.” What‘s your take on that?

Nongoma Ndlovu / For me it all starts with the energy of the song, the people I work with and the vibe. I always want to create something that moves people beyond the lyrical content. It‘s about creating a healing atmosphere with the song, even if it‘s playful. Fela Kuti once said in one of his interviews that „music is very powerful and should not be played with” and I fully agree with that statement. As artists we have an obligation to choose between whether you create art that ‚destructs or empowers‘ and that means something different to each artist individually. ⁘

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DISCOGRAPHY

// BINTA // 2016
// YOW // 2021
// In Stone EP // 2023
// Halo‘s Glitter // 2025

Digital Culture: Reviews

To the Barricades

It has become exceedingly difficult for most musicians to get their music reviewed. Ironically, the only thing harder than that is getting a bad review. Criticism is increasingly degenerating into a poetry of pure praise, and journalism and PR are converging. How did it come to this – and will it ever change again?

by Tobias Fischer

2004 was the year of a dramatic summit. The media were in an uproar, harsh words were exchanged, objections voiced, before the parties involved agreed to a personal meeting. Was this a secret NATO conference? The threat of a global economic crisis? A trade war? None of the above. Rather, the dispute saw songwriter Ryan Adams clash with journalist Amanda Petrusich. Writing for influential online magazine Pitchfork, Petrusich had recently panned Adams‘ album Rock n Roll, awarding it a resounding verbal slap in the face with a score of 2.9 out of 10. Adams was both irritated and fascinated and suggested a conversation to allow both sides to present their views. The ensuing conversation, however, in no way brought them any closer to an agreement. Pitchfork did not recant their statement, and the dispute was generally considered a victory for the journalist. Regardless of this, from today‘s perspective, one thing in particular remains astonishing: there really was an era when album reviews were considered important and music journalism held a certain authority in the public cultural debate. [1]

That era, this much is certain, has long gone. It faded gradually. In publications such as Rolling Stone magazine, ratings would increasingly become less acerbic and settle for a friendly just-above-average score, Pitchfork became increasingly sympathetic to artists from non-underground genres, while online portal Resident Adviser abolished its numerical rating system altogether. What began as a suspicion amongst attentive readers – that critics were no longer allowed to be critical and that negative opinions were considered deviations from the company line – was easily confirmed by crunching the numbers. Crack magazine discovered that over a five-year period, only eight out of a grand total of 7,287 reviews on the Metacritic website had received a predominantly negative rating. This observation is now eight years in the past, but the underlying developments have certainly not slowed down since then; rather, they have accelerated and intensified. [2]

And so it is that the discussion about what the role, function and significance of what music journalism should stand for in 2025 and beyond is flaring up again.

This renewed interest was triggered by an article by New Yorker author Kelefa Sanneh.

Sanneh thus writes for one of the few remaining magazines of the ‘old analogue world’ that has survived into the new digital era. [3] For Sanneh, there is a clearly identifiable cause for the lack of courage, absence of vigour and the palpable powerlessness of today‘s generation of critics: a philosophy called ‚poptimism‘. During the 70s and 80s, a small caste of influential journalists held sway over a scene characterised by a divide between big, larger-than-life superstars and a huge pool of independent creatives. These journalists celebrated rock music and, to a degree, jazz as the only true, serious music of the modern era and branded any commercial pandering as a sell-out. As their writing turned more and more arrogant, protest against their elitism solidified into a movement in the 90s. Poptimism was a counter-point that was originally simply intended to draw attention to the fact that great songwriting and progressive ideas could also be found in the spheres of popular music. One of the most important albums that proponents of this view used as an example was Britney Spears‘ Blackout, a surprisingly dark work by an artist on the verge of a nervous breakdown. On this release, which suitably marked Spears‘ decline as the leading popstar of her generation, did not fit into the usual clichés, it was dark, experimental, and impenetrable and, while shedding many of her early fans, earned Spears a new audience away from the safety of mainstream productions.

It should go without saying that any artists deserves a fair assessment of their work. However, as Sanneh convincingly argues, the zeitgeist-oriented poptimism perspective increasingly degenerated into a slavish worship of commercial music in general and ultimately led music criticism as a whole into an identity crisis: if Beyoncé and Madonna have to be given just as much respect as Bruce Springsteen and Kendrick Lamar, what does quality even mean anymore? There may be no objective answer to this question, but the decision-makers at the major publishing houses, which by now owned most of the once proudly independent magazines, came to the seemingly plausible conclusion that “good music” was defined by how many people listened to it. It helped that this attitude seemed sensible from a business point of view. And so pop albums started to close the rating gap with rock albums and journalists suddenly found themselves having to comb through the new Sabrina Carpenter single in search of profound life lessons and hidden messages. It goes without saying that this mentality would sooner rather than later backfire on publishers, as it made reporting all but indistinguishable from paid advertising – fittingly, revenues from the advertising business in the print industry also declined, further cementing the downward spiral of journalism. And so reviews, once the key authority for informed discussion of current releases, rightly lost their standing.

All of this leads to a key point that the New Yorker article hardly addresses:

The extreme power shift between artists and the journalists writing about them.

In the 1960s and 1970s, the leading British music magazines could proudly boast circulations of 200,000 to 300,000 copies. The American original of Rolling Stone magazine even reached almost 1.5 million copies at its peak in the 1990s. Daily newspapers, which also had their own specialised and often high-profile culture sections, achieved even higher figures. This gave them a powerful mediating role between the music and its audience. Today, however, Beyoncé can reach an audience of 300 million fans via her Instagram account alone, while Rolling Stone magazine has sunk to a readership of just 100,000. [4] In short, the biggest and best-known stars don‘t need journalists and can even release albums without any advance sampling – perhaps the ultimate humiliation for old-school critics.

However, it is simply not true that music fans are no longer interested in opinions, interviews and commentary. They just don‘t seem to want them to hurt anyone. Rather, they want them to ideally celebrate the artists they admire or to confirm their own takes. And so the space once occupied by music journalism has been filled by influencers, YouTubers and bloggers – many of whom are themselves uncritical fans or opportunists. On the one hand, the role formerly reserved for journalists is now taken on by a few well-known freelancers who occasionally receive commissioned work and otherwise build up a mostly small but loyal community with their own newsletter, for example via Substack. On the other hand, there is also a new type of presenter, most clearly exemplified by Australian radio DJ and Apple Music's flagship interviewer Zane Lowe. Lowe, who is easy to mistake as a traditional journalist, stages his conversations with stars like Billie Eilish, the Red Hot Chili Peppers, Katie Musgrave and Adele – whose music he uniformly celebrates as unique spiritual experiences – as intimate confessional rituals in which stars let their masks slip. The result, however, is far more mundane than that and usually a rather feels like a shallow descent into banality, devoid of any excitement. Finally, there's a sprawling fan culture on channels such as 'Chats and Reacts' or 'Swiftologist,' which focus almost exclusively on the work of a single artist and reach the kind of huge audience established names in journalism can only dream of.

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[1] https://pitchfork.com/reviews/albums/40-rock-n-roll/; [2] https://crackmagazine.net/article/long-reads/when-did-music-journalism-stop-wielding-the-axe/
[3] https://www.newyorker.com/magazine/2025/09/01/how-music-criticism-lost-its-edge
[4] https://loudandquiet.substack.com/p/what-people-forget-when-they-say-music-critics-have-lost-their-edge

It may seem as though Sanneh's article sparked a lively exchange of opinions.

In fact, there are some good threads in many Reddits and forums in which participants emphasise that music journalism does indeed play an important role in the community. However, the difficulty of substantiating this feeling with arguments becomes clear when one tries to pinpoint what distinguishes journalism from criticism and both from the realm of music influencers. Music journalist Stanley C, for example, believes that attention is the only currency among influencers, while journalism and reviews represent an attempt to get closer to the 'truth.' [5] Especially in an emotionally charged industry such as music, this concept is, of course, highly relative and fundamentally questionable.

One must also ask: what is the value of a bad review or critical questioning? Shouldn't music simply be enjoyed? Britt Brown wrote a kind of eulogy to the scathing review for the English magazine The Wire, which still holds true today: „At its best, criticism reminds you that music has no fixed value. Countless acclaimed albums were scorned or skipped over in their time, and many once successful musicians have now been forgotten. The scales of taste constantly self-correct long after the egos involved dissolve. To be misunderstood in one's own time is the foundation of many a fascinating legacy. To criticise something is to take it seriously; it is to sense within the art or artist a potential for something greater or deeper or more vibrant. It questions how the creation falls short of itself and its maker, not how it falls short of the critic." [6]

These words are as eloquent as they are passionate, but perhaps, at the end of the day, they are unnecessary. Just like everything else in the music business, trends in journalism are cyclical. As I'm writing this, there are many openly dismissive reviews of Taylor Swift's new album that, just a few years ago, would have had some reviewers fearing for their physical safety. In my opinion, the album isn't actually as bad as some of my colleagues are making it out to be. But it's really good to see so all of the pent-up criticism finally being vented. Brown is right – only when we take to the barricades for the art we love or despise do we truly award it the respect it deserves. ⁘

Are bad reviews gone for ever – or about to make a comeback?

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[5] https://medium.com/1ntune/the-growing-divide-between-influencers-and-music-journalists-e7f6a250b317
[6] https://www.thewire.co.uk/in-writing/collateral-damage/collateral-damage-negative-reviews

Photo: Nadine Fraczkowski

> »For us, the album is the format in which we prefer to bundle ideas.« (Stephen Dewaele)

Portrait: Soulwax

Art and deadlines

Whether as DJs, producers for other acts, remixers, or label operators of Deewee - Stephen and David Dewaele have a jam-packed schedule. No wonder, then, that it took the Belgian brother duo seven years to complete a new Soulwax album. But as the saying goes, the wait was worth it: „All Systems Are Lying“ combines all those ingredients between electro, dance, and indie that fans of the band have always appreciated. We spoke to the duo in a Zoom call about the creation of the album and their versatile work. **Interview: Sascha Blach**

Beat / ***„All Systems Are Lying is your first album in seven years – if you count „Essential“ from 2018 as the last studio album. Why did it take so long?***

David / There was the pandemic, which slowed us down like everyone else. After that, it took quite a while to get back into the rhythm. At the same time, we‘re constantly busy with other projects – whether remixes, productions, soundtracks, or DJ sets. It‘s easy to lose sight of the fact that we‘re also a band. A year passes, then two, you tour, write a few songs in between – and suddenly someone tells you the last album was seven years ago. There was no big plan behind it. It‘s just life getting in the way.

Beat / ***Does the album format still hold the same significance for you as before?***

Stephen / Definitely. Look around here (he gestures to the walls full of vinyl records in the background). For us, the album is the format in which we prefer to bundle ideas. Individual tracks are like fragments, but an album is a collection, a kind of exhibition with different pieces that together form a bigger picture. Even on our label, we notice that an album is perceived very differently from a single or a 12-inch. Even if a track is 25 minutes long, it doesn‘t have the same impact. We love this format, and the more it is questioned, the more important it seems to become to us.

Beat / ***The label info describes the new album as a rock album without guitars. Would you agree with that?***

David / That line didn‘t come from us. Some pieces have a structure that could be implemented with guitar, bass, and drums. Others are pure studio constructions that wouldn‘t exist without electronics. We ourselves wouldn‘t categorize the album – we prefer to leave that work to journalists and record labels.

Beat / ***Do you approach an album with a concrete vision?***

Stephen / We often have concepts, but not this time. We just wrote and saw what happened. As a result, a very intuitive album emerged, probably the least deliberate in our discography. We tried songs, played them live, discarded some, and developed others further. As soon as you play something live to an audience, it takes on a life of its own – and that‘s how we realized which pieces really work.

David / It might be our freshest approach so far. Less thought-out, less planned – just what came out of us.

Beat / ***Many pieces started at the piano, you revealed in another interview. But on the album, you mainly hear a lot of modular synths. How did you translate the songs from the piano into the modular synth world?***

David / We only took the songs that translated well. Some work on the piano but not with synths – those were left out. Others fit perfectly into our live setup with three drummers and modular systems. The exact process is hard to explain: you sit there, try things out, and suddenly realize this works in this world.

Stephen / We don‘t work academically anyway. There‘s rarely a plan for a song to sound exactly this way. Much is created in the moment, intuitively. If a song feels wrong, we stop, delete it, move on. Even if one of us doesn‘t like it. It saves time and prevents endless dead ends.

Beat / ***Which instruments shaped the sound in particular?***

David / The EMS Synthi AKS and an Oberheim Eight Voice are very present. But in essence, we use everything in the studio. Since we started buying obscure stuff 30 years ago, we‘ve built a collection that‘s almost like a museum - not because we‘re actually collectors, but because we started early. Today, many devices are unaffordable, but for us, they‘re working tools. What‘s important isn‘t whether something is vintage or analog but whether it sounds cool.

Beat / ***Do you work more with hardware or plugins?***

David / Both. Plugins are practical and fast, but almost always the actual device sounds deeper, more organic. There‘s no fixed rule – what matters is what supports the song.

Stephen / On the computer, you have endless options, which can also be paralyzing. On a real instrument, however, a performance, something physical, automatically arises. In the end, it‘s the mix: sometimes we sketch something on the computer and replace it later, sometimes everything comes directly from the machine.

Beat / ***What does your studio routine look like? Do you have fixed schedules?***

Stephen / That would be nice. The hardest part is finding time at all. We‘re constantly working on different projects – for other artists, for cinema, for fashion, and we‘re also active as DJs. That‘s why we have to fight for every hour for Soulwax. Our problem isn‘t creativity, it‘s more about time. Deadlines – such as a date in the mastering studio – help us a lot because they force us to finish things.

Beat / ***Which music influenced you this time?***

David / That‘s hard to say. We listen to so much every day, also in our work for the label - it would almost be unfair to single out a few records. We didn‘t sit down and say, let‘s sound like this band. It was more a constant flow of impressions.

Stephen / Exactly. We came into the studio, played the piano or with synths, developed ideas further – and the album came together almost unconsciously. That might not be a great interview quote, but it‘s true. We love not knowing where the journey is going.

Beat / ***The title „All Systems Are Lying“ sounds very conceptual.***

Stephen / It originally came from frustration: when software or a device didn‘t do what it promised, we would jokingly say this quote during this and other productions, like that of Marie Davidson: All systems are lying. At some point, we thought that it also works as an album title. It fits not only for technical systems but also for the world outside. Many have read political meanings into it, and that‘s completely legitimate.

Beat / ***What role do the lyrics generally play for you on the album? Are they also the result of spontaneous processes?***

Stephen / Yes. Many arose very spontaneously, almost like a stream of consciousness. Often they were voice memos we recorded; sometimes it was the first attempt that ended up directly on the record. It wasn‘t, for example, the goal to write a song about the climate issue - yet one might interpret that in „Hot Like Sahara“. For „Run Free“, for example, the lyrics express exactly what we felt about music in that moment: to be free without rules. We don‘t have notebooks full of verses, we capture the moment.

Beat / ***How do you prepare for live shows?***

Stephen / With enormous effort. That‘s a whole other whole other ballgame because the way we play is with three drummers and we made these custom made controllers that each had a separate flight case with synths. Since we can‘t take many of the original devices from the studio, we have to reprogram or approximate the sounds. This means long rehearsals and a complex setup – we never make it easy for ourselves. But that‘s also where the appeal lies.

Beat / ***What‘s next for you?***

David / We‘re currently producing various artists and aren‘t allowed to name some of them yet – including acts from our Deewee label like Charlotte Adigéry, Bolis Pupul, or Asa Moto. In parallel, we‘re preparing the live shows, traveling to the USA for our joint sound system project called Despacio with James from LCD Soundsystem, and obviously, we‘re also active as DJs. Plus, there are always fashion projects. There‘s always a lot to do – we‘re basically never not working.

Beat / ***Sounds like an exciting life. Thank you for the conversation.***

www.soulwax.com

BEHIND
THE BEAT

Episode #53 with Emme Moises

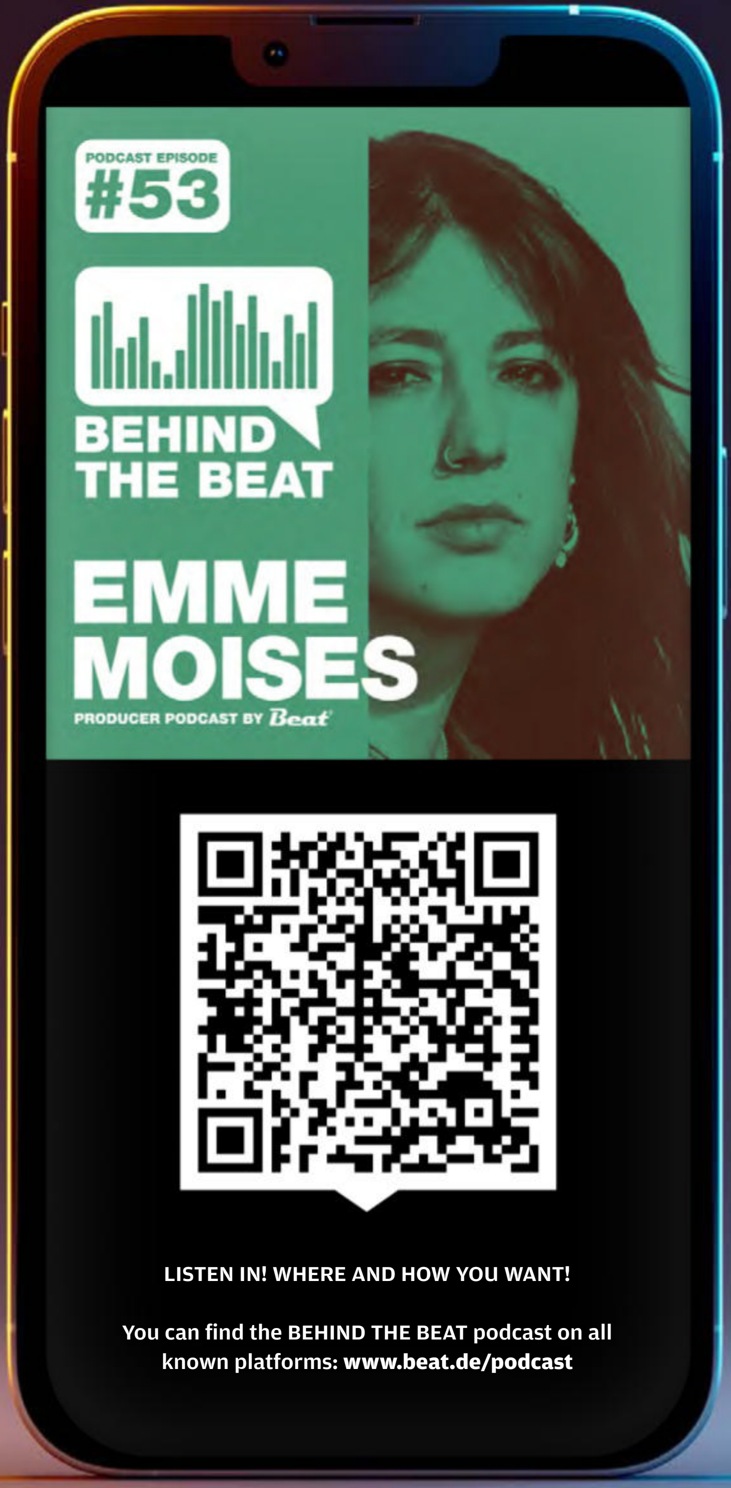
Are still true surprises out there?

This episode is dedicated to Emme Moises, her uniquely psychedelic electronic music, and her love for modular synths.

Beat / The label info describes the new album as a "rock album without guitars." Would you agree with that?
Emme Moises / We live in such interesting times that there are always surprises. I find it difficult to keep up with all the new tools and experimental technologies. It feels like the creative world is turning into an endless pool of experiments. And I want to try everything!

Beat / How important is it to you to use specific instruments?
Emme Moises / Sometimes I want a certain sound or composition and then look for the right tool. For my ambient EP "wewerelost," I worked a lot with the Nord synthesizer that my friend Simone brought to the studio for jamming. After several sessions, this instrument inspired the whole concept of dark loneliness that characterizes this EP.

6.000 listeners
are already on board! You too?



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Beat / ***Why are you so enthusiastic about modular synths right now?***
Emme Moises / It's about freeing myself from certain personal limitations when it comes to electronic music. I feel like the modular tells me what to do or where to go, rather than the other way around. I like this feeling of letting go of absolute control. I plug in the cables, but the modules determine the path.

Beat / ***I think the Moog Subsequent 37 is your favorite device. What do you like about this synthesizer?***
Emme Moises / I love its versatility and the depth of the oscillators. Plus, the filter knob is just perfect! I recorded most of my electronic bass sounds with this synthesizer. It's so much fun to play it like you would in a live situation and create acid-like modulations, bright leads, and ambient textures. The step sequencer is quite interesting. It offers up to 64 steps, and in duo mode, two pitches can be played simultaneously. Right after I bought it, I used it to create a chord-like sci-fi landscape.

www.beat.de/podcast

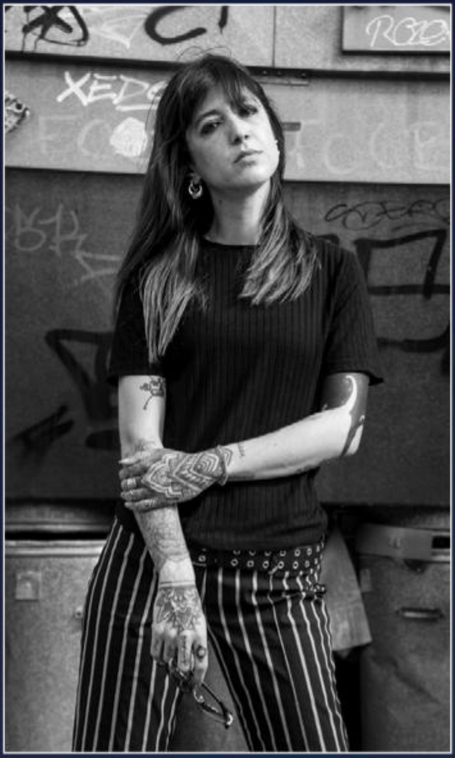

Photo: Gabriel Strobel

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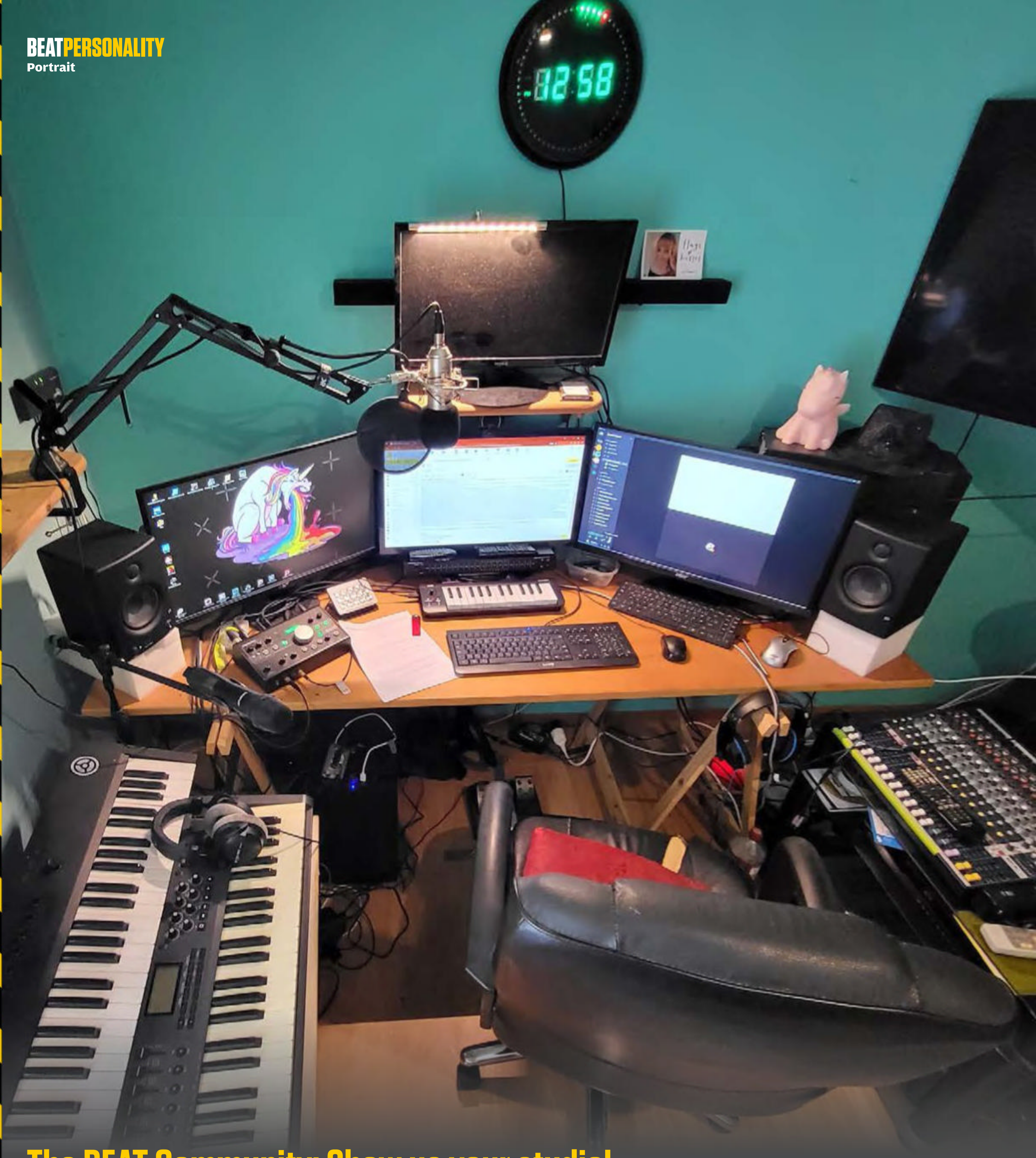


The BEAT Community: Show us your studio!

Christian Morlock

It‘s always refreshing to see how others set up their studios and work in them. After our call on Facebook, you guys really flooded us with responses, and that‘s great. So it quickly became clear: We‘re going to turn this into a series to inspire and engage everyone. This month, we feature Christian Morlock. by Marco Scherer

I set up my home studio so that I can access everything quickly and easily. To be honest, I didn't think about things like the distance between the near-field monitors or the arrangement of the MIDI keyboards. When I started producing my music, I didn't know anything about that. Sure, I thought to myself, "Music, what's that?" No, joking aside. I used to play music at small parties with a mixing console from time to time, so I had a little bit of a feel for rhythm.

Since I'm not a pro at studio construction or stuff like room acoustics and speaker spacing, and I'm not an all-rounder when it comes to studio tech, I just do what I enjoy and get the gear I want. My musical passion leans toward Chill Out, Trance, Relax, and occasionally EDM, depending on my mood. The music I make here in my small home studio will be produced solely for my own enjoyment.

The path to publication

My children and colleagues suggested that I upload my music to various platforms such as YouTube or Spotify. I'm still a little hesitant to go online on these channels to reach a wider audience; however, I decided to sign up for the streaming platform, Twitch, first to present my music there in a livestream. And lo and behold, I already had a few viewers who then followed me.

My setup and workflow

I started out small, with the free DAW, Reaper. Now I use the paid version, which costs just under 70 Euro. The DAW is simple but functional. When you buy new VST plugins, it does its job and embeds them into your system like the other big providers. As a beginner, you don't need to worry about that. My setup consists only of technology and software. To be honest, I haven't given any thought to room acoustics, as I don't record vocals, even though I own microphones.

My setup consists of the following components:

- Monitors: Three (two Acer 27-inch and one Asus 24-inch)
- MIDI Keyboards: Three (a KORG microKEY, a Native Instruments S61, and an M-Audio Axiom 49)
- Entertainment Keyboard: A KORG EK-50
- Nearfield Monitors: Presonus Eris E4.5
- Headphones: Beyerdynamic DT 770 Pro 80 Ohm
- Amplifier: An Onkyo 5.1 amplifier with Imperion speakers to check how it sounds on the system.
- Audio Interface: Behringer BIG KNOB Studio
- Microphones: A wireless set from Kimafun (Chinese product) and an MXL 2006 vocal mic.
- Mixer: A small Soundcraft EFX12 with 12 channels.
- Streaming accessories: An Elgato Streamdeck.
- Instruments: As mentioned, the KORG EK-50 and a Yamaha Electric Guitar.

I obtained my software either from your magazine, Beat, or from the internet.

Plugins and hard drives

Three years ago, I signed up with HOFA. This gave me the opportunity to obtain many plugins free of charge, which I use extensively, including those from other manufacturers.

What I can't do without are my hard drives. That's where all my projects and software programs are stored. Sure, I have backups, but it would be annoying to have to set everything up again with passwords and keys. So far, I've only published my sounds on Twitch. But I'm considering signing up with local providers. It's not about making money for me, but rather about transforming my feelings into sounds and diving into another world.

Creative process and purchasing decisions

When I'm at home in the evenings or on weekends, I sit down at my computer and just make a beat or bass track. That determines the direction the project will take. I want to be able to work without distractions, although you can't really call it work. I build my sounds without a fixed pattern. I tinker with something, then stop, pull the project back into the DAW and continue, or it can also happen more often that I create a new sound. I don't stress myself out about it.

I bought almost all of my equipment at Thomann or locally. I get software and plugins from "Beat," sometimes with CDs or the magazine "KEYS," otherwise via the Internet. My studio is my former childhood bedroom, and I haven't soundproofed it with panels or carpet, as is common in rehearsal rooms.

The room acoustics would be a real nightmare for any professional. I listen to and will produce a lot of music using headphones. I would love to have Steinberg software, the Triton and Polysix range, but they are a bit expensive. However, the VST plug-ins I currently have are sufficient. The way my small studio is set up is enough for my needs. For anyone who wants to make music on a computer for the first time, I have only one piece of advice: Follow your heart.

I already have so many songs that I've basically stored them in albums on my hard drive. They're all called "Das Kotzende Einhorn 1 to 3" (The Vomiting Unicorn 1 to 3). Laugh.

Stay motivated, everyone out there, the music world is very, very big and extensive, I speak from experience. ⁘

Free: Ultimate 808 for Wavea Flite

Cult Drums with SSL Punch

With Ultimate 808, Wavea delivers an explosive expansion for their free sound generator, Wavea Flite Play, containing hundreds of finely tuned samples of the legendary drum machine. We are, of course, talking about the Roland TR-808, which was recorded for the ultimate punch via a classy SSL G-Series console. The result: Fat, punchy, and dynamically playable drums that you can tailor for any style with the macro controls!

by Mario Schumacher

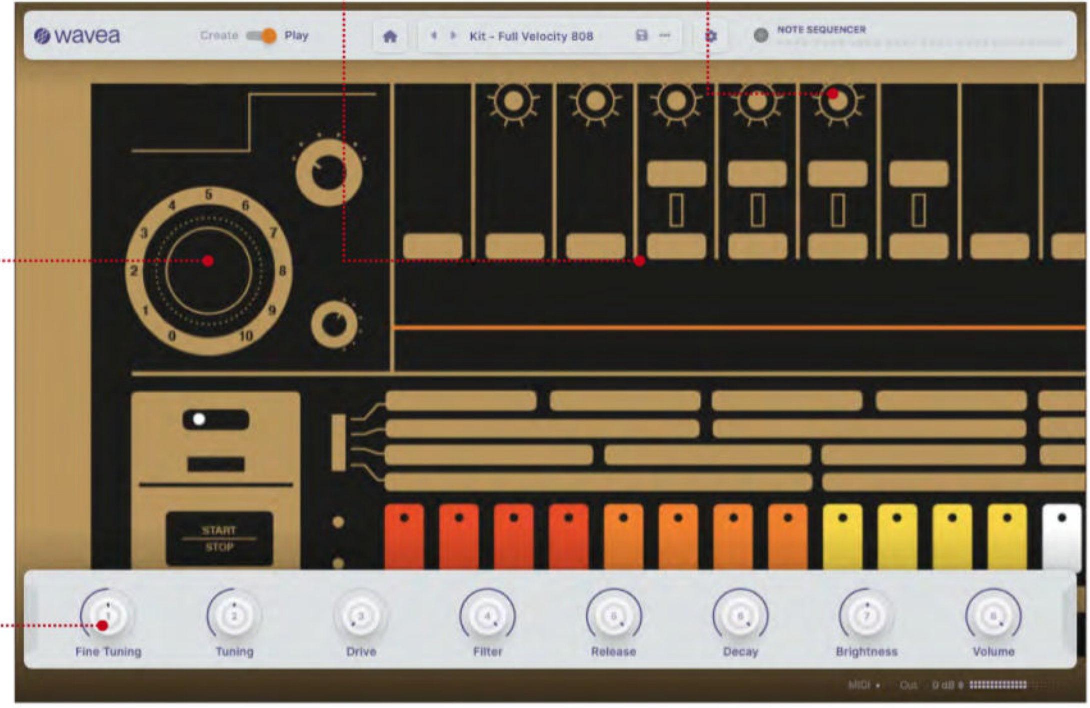
More info:

Info available at: www.wavea.co
License & password: www.serialcenter.de

808 meets SSL
Hundreds of meticulously recorded TR-808 samples ensure maximum penetration. Thanks to SSL saturation, everything sounds warm, round, and simultaneously razor-sharp defined – from fat kicks and cracking snares to crisp hi-hats.

The Player
Flite Play comes with 200 presets and 2.5 GB of sounds from some of the world's most sought-after synths. You load these via the integrated browser of this synth and sample player.

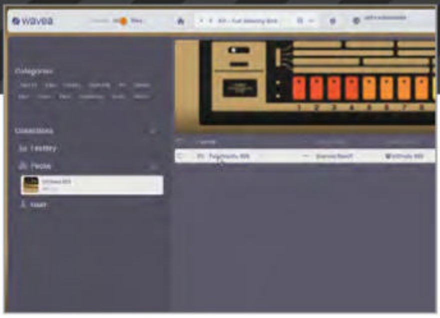
Punchy and expressive
The drums react dynamically to your play, making expressive beats for House, Techno, Hip Hop, Trap, or Pop a breeze. The Modulation Wheel controls the Reverb Intensity – perfect for quick dynamics in live sets or spontaneous variation in arrangements.



Sound control
Ultimate 808 runs in the free Flite Play sound generator. With its eight macro controls, you can manage sound parameters such as Drive, Filter, Decay, and Brightness. Tip: These controls can also be managed via host automation. With the Drive control, you can achieve monstrous Trap Drums.

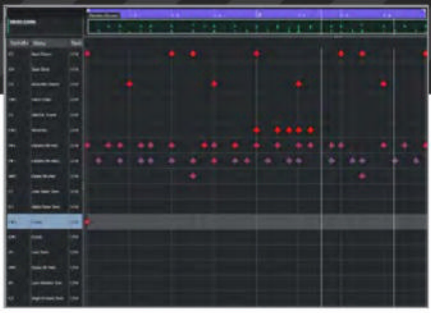
REGISTRATION & INSTALLATION

Registration of Ultimate 808 for Wavea Flite is done via www.serialcenter.de. You will receive a serial number that you can register with Wavea.



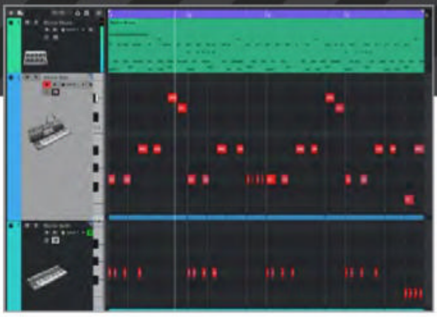
1 Cult Drums

Virtually no other drum machine has had such a profound influence as Roland‘s TR-808. That‘s reason enough to use **Ultimate 808** for Wavea Flite [1] to create rousing grooves for Electro, Trap, and Moombahton! Load Flite into your DAW, open the **Ultimate 808** pack, and select **Kit – Full Velocity 808**. Set the tempo to 120 for a classic Electro Beat.



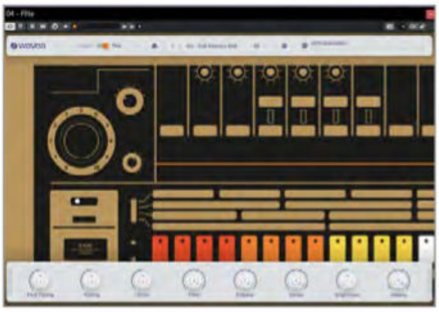
2 Electro Groove

The Bass Drum plays on the eighth notes 1, 5, and 6. We place the Snare on the quarter notes 2 and 4. The desired pulse is provided by a continuous sixteenth note pattern of the closed Hi-Hat with the open Hi-Hat on the eighth notes 5 in bar 1 and 7 in bar 2. The Rimshot pattern shown at the begining of every second bar provides rhythmic accents.



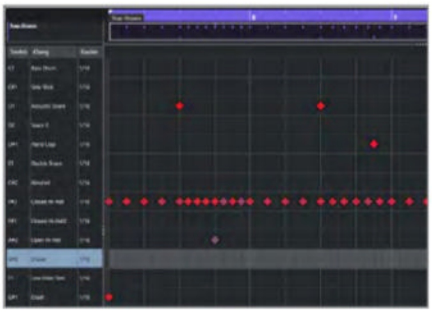
3 Swing & Synths

The Crash Cymbal emphasizes the downbeat in bar 1. With a swing value of 30%, you can bring the programmed pattern to life. For a cool retro Electro groove, we load another instance of Wavea Flite with the bass preset **Prophet Solo**, which plays the sequence shown. The preset **Model D Runs** with staccato notes provides additional momentum.



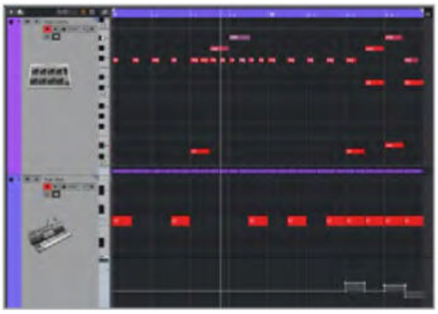
4 Trap Groove

Ultimate 808 also excels in Trap productions. Here, we start our beat at 140 BPM and the **Kit – Full Velocity 808**, which gets the desired bite with a Drive value of 50%. The Snare plays on the third quarter note. Typical of this style are the stuttering Hi-Hats with an eighth note pattern in the first half of each bar.



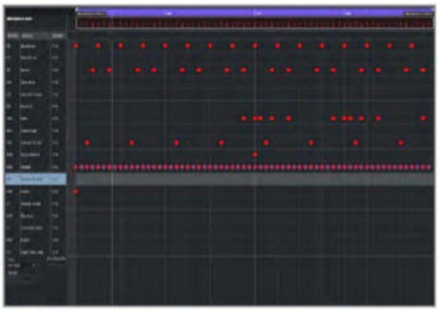
5 Stuttering Hi-Hats

In the second half of the beat, sixteenth notes and triplet eighth notes alternate with each other. The open Hi-Hat complements the beat on the fourth quarter note of bars 1, 3, and 4. A Clap sample adds accents at the end of bars 2 and 4. We continue with the Bass, for which we use another instance of Flite Play with Ultimate 808.



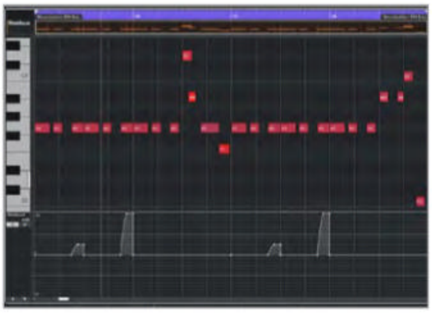
6 Kick as Bass

Tune the Kick Drum to the note G using **Tuning** and **Fine Tune**. You can play your Bass at different pitches using the Pitch Wheel. By scaling the Pitch value in your DAW, you can always hit the exact pitches. **Voxengo Tube Amp** [2] provides the desired punch, and **Xfer OTT** [3] gives the sound extra punch.



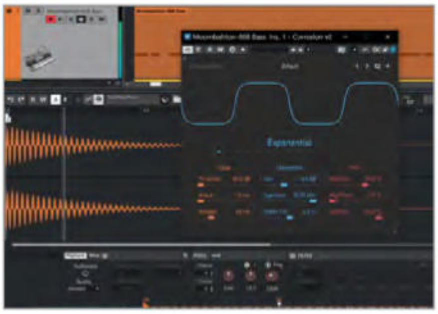
7 Moombahton Beat

Next up is the Moombahton groove at 104 BPM, for which we also use the 808 kit. The typical groove is created here by the Snare pattern, with hits on the sixteenth note beats 4, 7, 12, and 15. The Bass Drum plays a continuous quarter note rhythm and the Hi-Hats contribute a very simple sixteenth note pattern.



8 Typical Bass

We place the Crash sound on the downbeat of the first bar, and the syncopated Clap rhythm provides variety. In this groove, the Kick Drum also takes on the role of Bass. Sample it and then load it into your DAW‘s sampler to make it playable tonally. Use Pitch Bends here, too, for the necessary spice.



9 Synth Accompaniment

For a rich Sub-Bass sound, you‘ll also need a distortion or saturation plug-in such as **Sinevibes Corrosion v2 [4]**. What could be a better addition than a powerful synth brass riff? Flite Play provides a suitable sound with the **Stronk Bass** preset. Here, we use two instances of the monophonic sound, the second playing an octave higher.

[1] www.wavea.co; [2] www.voxengo.com; [3] www.xferrecords.com; [4] www.sinevibes.com

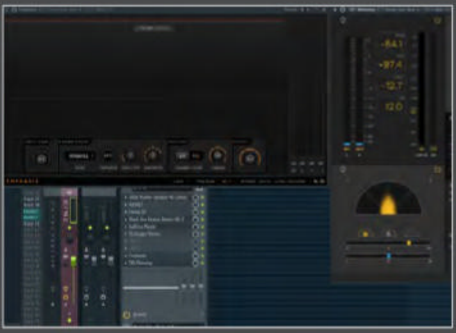
Power Producer: FL Studio

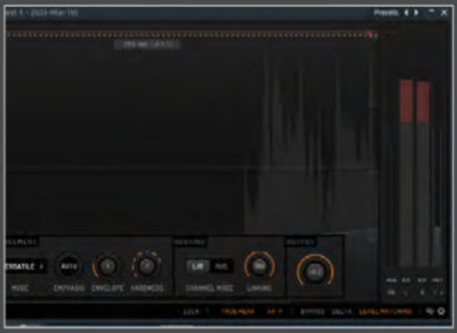
Loudness to the limit

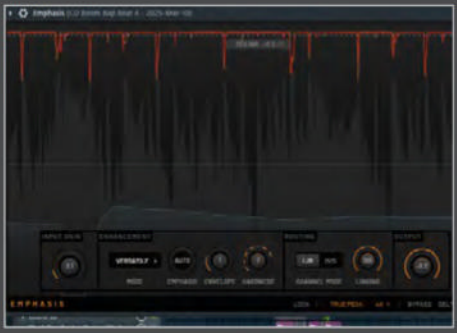
The loudness war may be over, with loudness having prevailed in the end, but, unfortunately, often at the expense of dynamics and clarity. Distortion and loss of impact are the classic problems in Mastering. However, with the new FL Studio plugin Emphasis, there is now a tool that addresses exactly this: Loud, powerful, and yet dynamic, if used correctly. **by Ruben Mantel**

Project info

Material: Fruity Loops Studio 2025
Time required: Approximately 20 minutes
Content: Using the Emphasis Limiter for a clear, loud Master.
Difficulty: Beginner







1 Setup

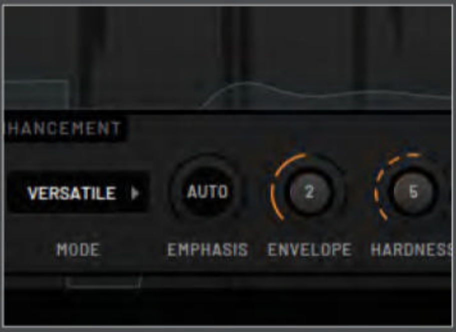
Before using Emphasis, the mix must be cleanly prepared. Make sure your mix has at least **6 dB headroom** because the plugin can do a lot, but it doesn‘t fix already distorted signals. Place Emphasis at the end of your Mastering chain. Also add a **Metering Plugin**, to keep an eye on loudness, peaks, and dynamics.

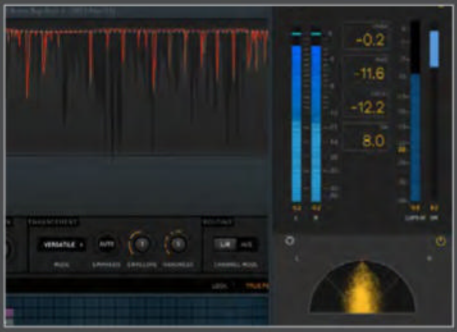
2 Level matching

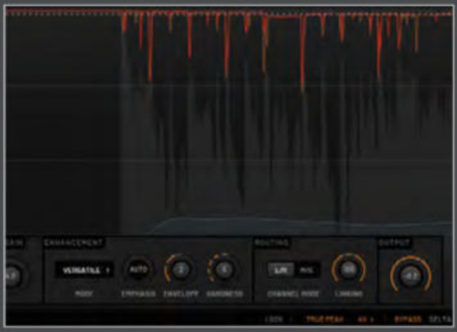
First activate **true peak limiting**, to avoid distortions. Then switch on **Level Matching**: This automatically adjusts the output volume to match the input level. This way, you only hear what the limiter really changes sonically without being misled by more loudness. This keeps the focus on the sound, not the level.

3 Gain

Now, slowly increase the **Input Gain**. Listen closely to how Emphasis compresses the mix. **Stop** just before noticeable **distortions** become audible. Slight saturation can be stylistically fitting but should only be applied deliberately. In the next step, more parameters can be used to adjust the distortion behavior in detail.







4 Enhancement

For most productions, we recommend using **Versatile Mode** with an **Envelope value of 2**. Next, adjust the **Hardness control**. Values between **3** and **5** often work best. Lower values produce a cleaner, more compact sound, while higher values add punch and dynamic bite. Experiment to find the right sound characteristics for your song.

5 Loudness target

Now adjust the Input Gain again using the previous settings until your track reaches the desired loudness target for the music genre. Then, check the **LUFS** and **dynamic range** using a metering tool. It is very important to remember to disable level matching in order to measure the actual loudness.

6 Final check

Use the **Bypass button** to turn the plugin on and off. Thanks to reactivated Level Matching, you can now make a fair comparison. Does the mix sound louder, denser, and more professional without losing its liveliness? Small adjustments can make a big difference here. In the end, all controls should mesh together like gears.

Presets and audio demos
in the magazine downloads
(see page 9)

Power Producer: Logic

Epic Granular Pads

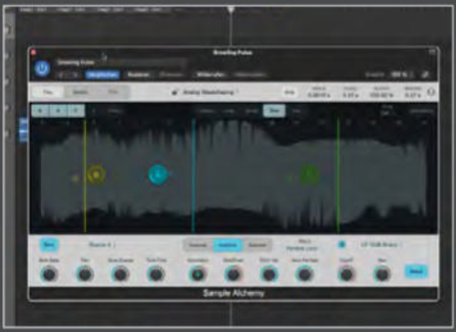
Sample Alchemy has been part of Logic Pro since version 10.8 and has been somewhat overshadowed by the powerful Alchemy soft synth. Unfairly so! The sampler offers endless sound design possibilities and a workflow that is incredibly accessible for granular synths. Perfect for atmospheric film and game sounds! Let's take a closer look.

by Julian Schmauch

Project information

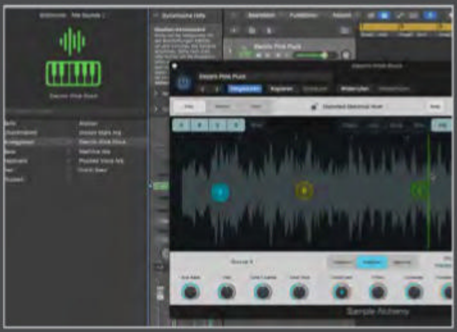
Material: Logic Pro 10.5
Time required: 60-120 minutes
Content: Use Granular Synthesizer Sample Alchemy for Ambient Sounds.
Difficulty: Advanced

More Info



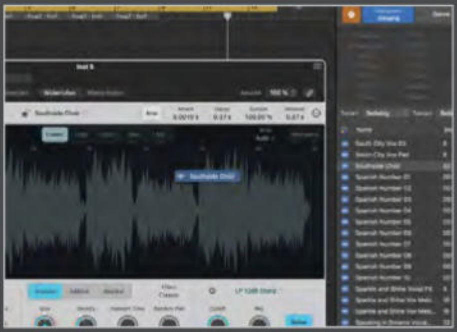
1 Difference to Alchemy

Why would you need Sample Alchemy when you already have Alchemy with its thousands of presets and different sound engines? Sample Alchemy makes it much easier to quickly process samples into granular clouds and spectral drones. You don't get lost in the complexity of Alchemy as easily, which is very valuable when producing music.



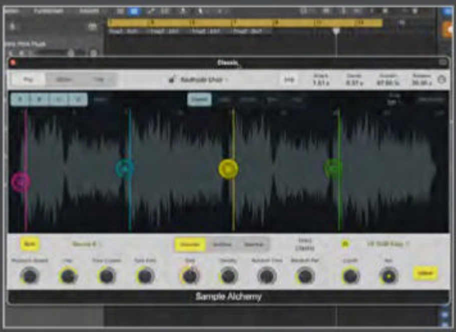
2 Presets galore

If you want to get to know the sonic possibilities of Sample Alchemy, we recommend starting with the countless presets in Logic Pro. The fact that you can simply play and hold a note and lose yourself for minutes in granular pads and cinematic atmospheres speaks volumes about the creative potential of this sampler.



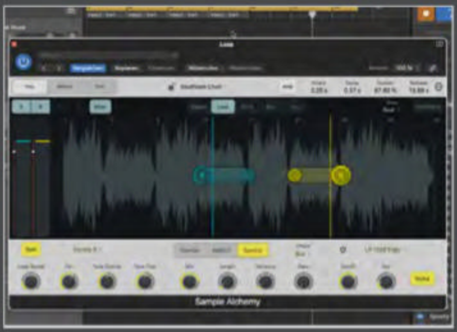
3 Unloop it!

Whether it's recordings from the voice memo app, clips from nature documentaries, or simply loops included in Logic, Sample Alchemy can be used to create fantastic soundscapes from almost any sound, especially if it's longer and more complex. To make it easier to replicate, I used the "Southside Choir" loop from Logic's Loop Library.



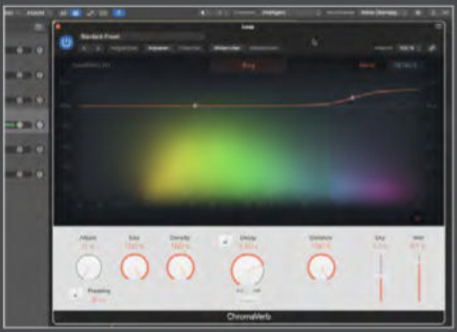
4 Four wins

Importing is very easy: Select the loop in the Loop Browser and drag it to the Sample Alchemy window. Now, when you play a MIDI note, the loop is played. The sampler offers four players, all of which we'll use for the sound. Distribute the four as shown in the picture and set the speed for each one to 12.5% in the lower left corner.



5 Double-Loop

It gets even more atmospheric in Loop Mode. Here, Sample Alchemy only allows two playback points, but in both directions, forwards and backwards. Set A and B as shown in the picture (loop speed 25%) and switch to Spectral Mode. The result: Beautifully meandering pads that should be gently attenuated with the Filter (Cutoff at 1700 Hz).



6 Make it big!

What's missing? A trip into the Ambient universe! You can do that with Chroma Verb, Logic's creative reverb effect. With its Airy algorithm, a Decay Time of just under 10 seconds, and a high effect Ratio (81%), we float to the end of the galaxy. Turn Size, Density, and Distance up to the max so the sound is as big as possible.

Power Producer: Cubase

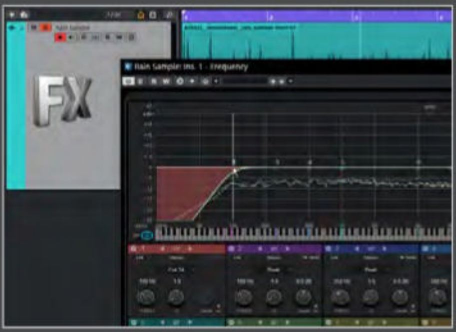
Pad Sounds from rain samples

Are the sounds of rain only useful as background atmosphere in music? Hold my coffee! With just a few steps in Cubase, you can turn raindrops and noise into organic pads. The result is floating soundscapes that are perfect for use as textures in Ambient, Electronica, or Film Soundtracks.

by Vera Schumacher

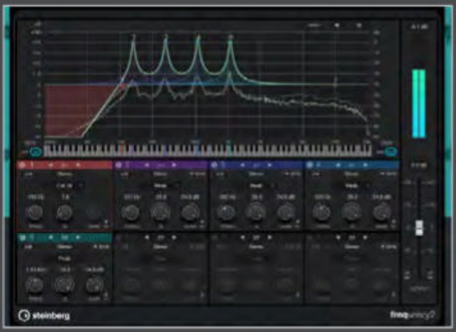
Project info

Material: Cubase 14 Artist or Pro
Time required: from 30 minutes
Content: Tonalizing rain sample, transforming it into a playable instrument in the Sampler Track, and shaping it into a pad with Reverb and Modulation.
Difficulty: Advanced



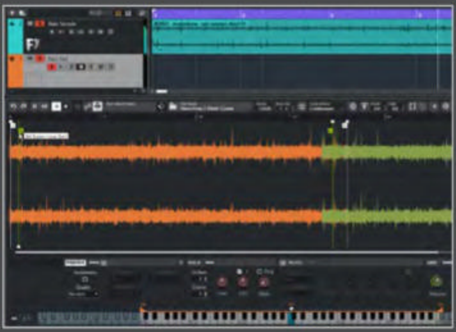
1 Load rain sample

First, find an atmospheric rain sample, such as from Freesound [1], and drag it onto an audio track in Cubase. The first step is to use the Equalizer to add Resonances to the sound so that it can be played tonally. Open **Frequency** and use a Lowcut Filter in Band 1 to filter out the low frequencies below 100 Hz.



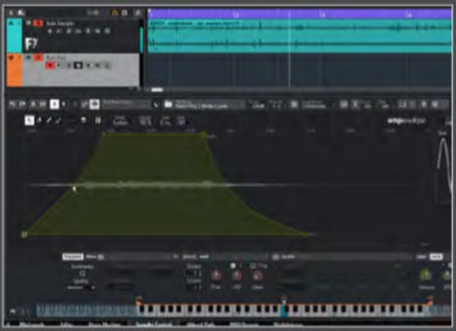
2 Create resonances

Now it's time to tune: Set bands 2–5 in Frequency to C2, C3, C4, and C5, and turn Q and Gain all the way up. This creates clear resonances that give the rain a tonal structure. Reduce the output gain if the signal is overdriven. So that we can use the sound as an instrument, we'll record it with Render in Place.



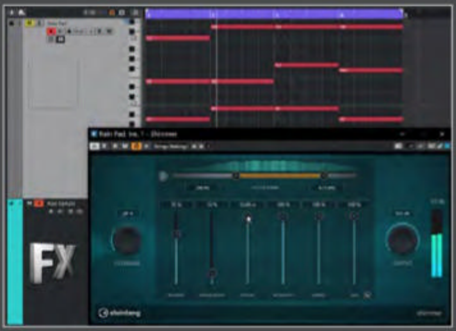
3 Feed the sampler

Then, open the lower zone and click on **Sampler Control**, to add a track. Drag the audio file you just created into the Sampler. There, we adjust the start point so that the sound begins softly. Adjust the loop points in **Continuous** Mode so that the loop plays seamlessly and switch to the **mod** page of the **AMP** module.



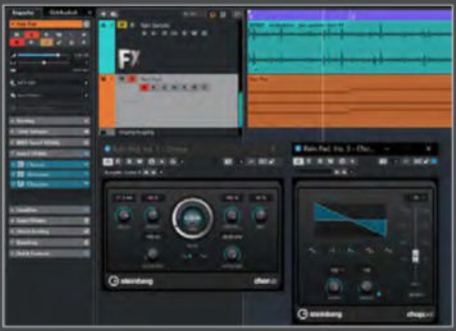
4 Envelope & Shimmer

Set a gentle Volume Envelope here, so you can play flowing chords with the sound. The transients of the rain are still too pronounced. A lush Reverb is one of the best tools for creating a soft, dense pad sound from it. Load the plug-in **Shimmer** as an Insert and select the preset **Strings Walking On Clouds**.



5 Effect Processing

The adjustments shown transform the sound into a floating pad. The **Pitch** value of **12.00** st ensures that the reverberated signal is transposed up one octave. Add modulation effects such as **Chorus** or **Phaser** for even more movement. The result is a lively soundscape that organically expands your arrangement.



6 Rhythmic pad

To ensure that the pad sound blends well into the mix, it may be useful to lower the high and low frequencies with filters. Want to add a little rhythm to your pad? You can do this quickly and easily with the **Chopper** plug-in. In the next issue, we'll show you how to conjure up epic percussion sounds from a rain sample.

---

[1] freesound.org/people/newlocknew/sounds/826025

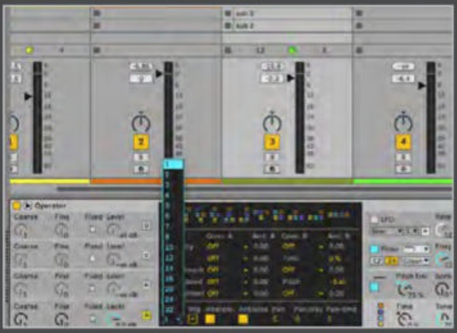
Power Producer: Ableton Live 12

House basslines with club power

In modern House tracks, slides, pitch drops, and call-and-response patterns characterize the sound—the bass drives the groove instead of just supporting it. In this workshop, you'll learn step-by-step how to program such contemporary basslines in Ableton Live and instantly give your track the necessary club energy. by Maya Consuelo Sternel

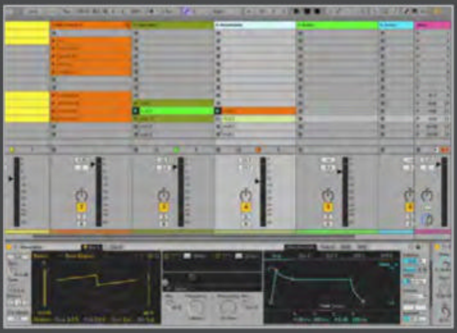
Project info

Material: Ableton Live 12
Time required: 30 minutes
Content: Create modern-sounding basslines with impact and groove, interactively program bass layers, add character and texture to the bass, insert genre-typical sound effects, ensure club suitability.
Difficulty: Advanced



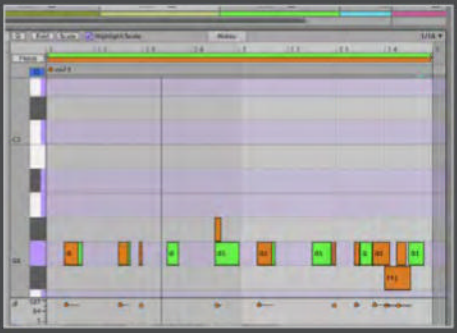
1 Bass Foundation

To ensure a track has full impact in the club, it needs a stable sub-bass. Load an Operator with a Sine Wave and set **Voices** to 1. For a warm sound that seamlessly blends with the Kick, activate the Pitch section and select **Pitch Env 73 %**. Activate Glide as well with **Time** set to 90 ms.



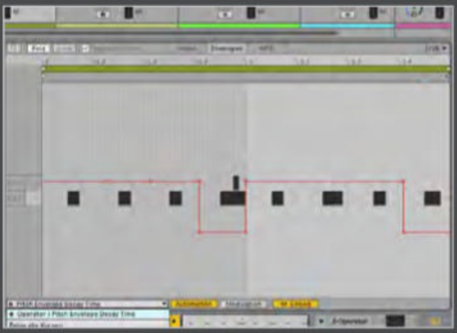
2 Design Mid-Layer

For the Amp Envelope, choose the following times: **Attack** 5 ms, **Decay** 100 ms, **Sustain** -8 dB, and for **Release** 80 ms. To ensure the sub doesn't sound too plain, create a second layer with the Wavetable synth. Choose a Square Wave. To avoid interfering with the sub, apply an EQ with a **Highpass Filter** at 100 Hz and a Lowpass at 3.5 kHz afterwards.



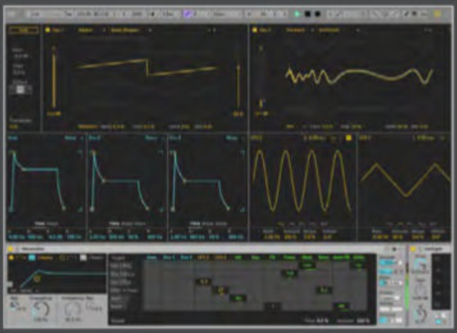
3 Call-and-Response

For more presence, use the Saturator in **Soft-Clip** Mode with +4 dB **Drive**. Now program a dialogue between the sub and mid-bass: Place the sub on the offbeats between the Kicks. The mid-layer responds with short notes, preferably on counts two and four. Applying an MPC Swing Groove on the clip adds additional drive.



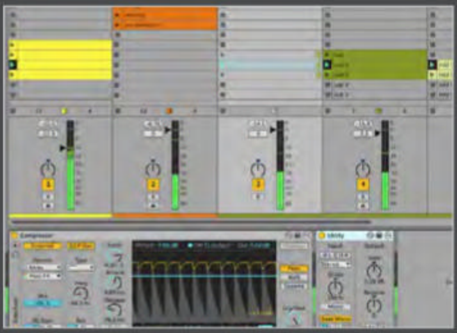
4 Insert sound effects

Set the Operator's Pitch Envelope to **Peak +16**. Automate the Decay of the Amp Envelope on every last note of the measure from 100 ms to 28 ms. This gives you the typical dive feeling of modern House basslines. To make the glide effect audible, duplicate the clip, extend some notes, and program short overlapping tones.



5 Add texture

Trendy house basses thrive on a little edginess. To achieve this, activate the second oscillator in the wavetable, select a Formant Waveform, and detune it by 10 cents. This creates subtle dissonance and modulated overtones. With a **Lowcut** at 145 Hz, **Resonance** at 34%, and slight LFO modulation, the bass remains dynamic without overpowering the sub.



6 Increase transparency

To prevent the Bass from masking the Kick, group the bass tracks and apply a compressor with the Kick in the sidechain. With **Attack** of 5 ms, **Release** of 80 ms, a **Gain** of 80 ms, and a gain reduction of 4 dB, you achieve more transparency. Load a Utility in the group and activate Bass Mono so everything below 120 Hz is in mono and remains club-ready.

Presets and audio demos in the magazine downloads (see page 9)

Power Producer: Bitwig

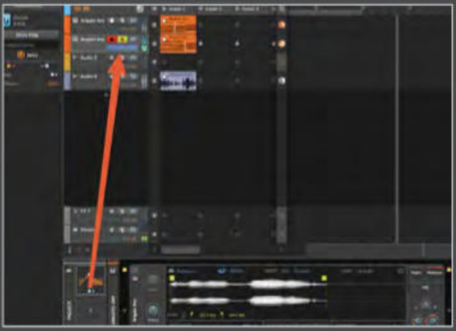
Create unique plug-ins

After building an unusual synthesizer ourselves in the last episode, today we‘re going to focus on effects. Although you can build unusual effect chains using DAW effects and VSTs, there are often limits to your imagination. In Bitwig‘s The Grid, on the other hand, there are (almost) no limits. Let‘s start with a Glitch and Distortion effect that is guaranteed not to exist as a plug-in yet! **by Laura Emiliano**

Project info

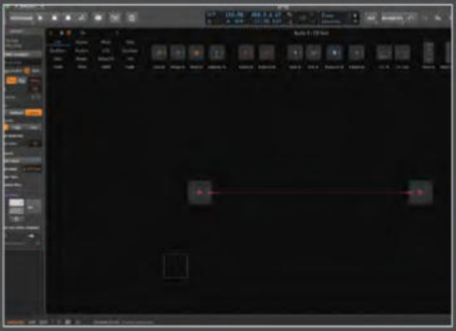
Material: Bitwig Studio 5
Time required: 30-60 minutes
Content: Building a rhythmic audio effect with FX Grid.
Difficulty: Advanced to Professional

More Info



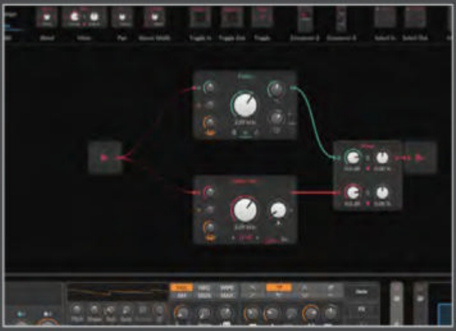
1 It‘s gate time

A simple Trance Gate effect that just modulates the volume of a track or clip rhythmically wouldn‘t need to be in The Grid. A Project Modulator in Bitwig with Curves on the track volume, and you‘re done. But if you want to go deeper into frequency ranges and distortion with crossovers, then FX Grid is simply the perfect starting point.



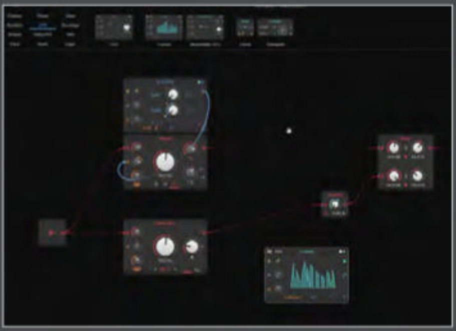
2 DIY audio effect

You need a track with audio material, such as a drum loop or synth pad, so you can hear what we‘re doing in FX Grid. Then, load FX Grid as an audio effect in the track and go to the eponymous grid interface to load the modules. The input and output are already conveniently wired, so you‘re ready to go!



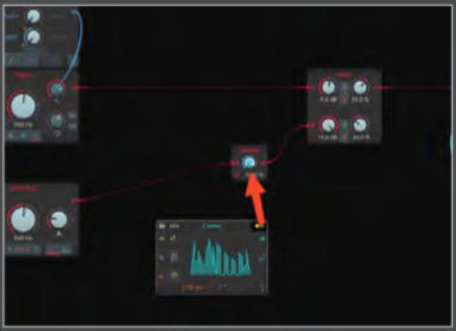
3 Filtering

The signal should go through two filter modules, a lowpass filter for bass processing and a highpass filter, from which all high frequencies are then rhythmically modulated like in a Trance Gate. This requires a ripple filter, a Sallen-Key filter, and a Mixer module to sum the two partial signals back to the output.



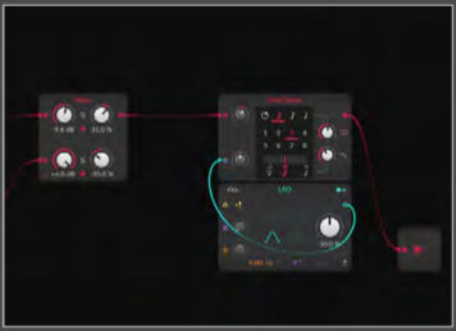
4 S/H LFO and Curves

Ripple is responsible for the low frequencies, with a Cutoff of 900 Hertz and Feedback of 22%. Using a Sample-and-Hold LFO, you can now modulate the Cutoff at sixteenth-note speed. For the Sallen-Key Filter, switch to the HP-2 Highpass Filter, set the Cutoff to approximately 1 kHz, and then add the Amplify Module and Curves.



5 Multiband Glitch

This is because the volume should be modulated with Amplify above 1 kHz. To do this, modulate the Amplify volume control with Curves and load the “Filter Rhythm 005” curve at a speed of 1 bar. Then, adjust the Mix Ratio between low and high frequencies on the Mixer. Every drum or vocal loop will now sound more exciting!

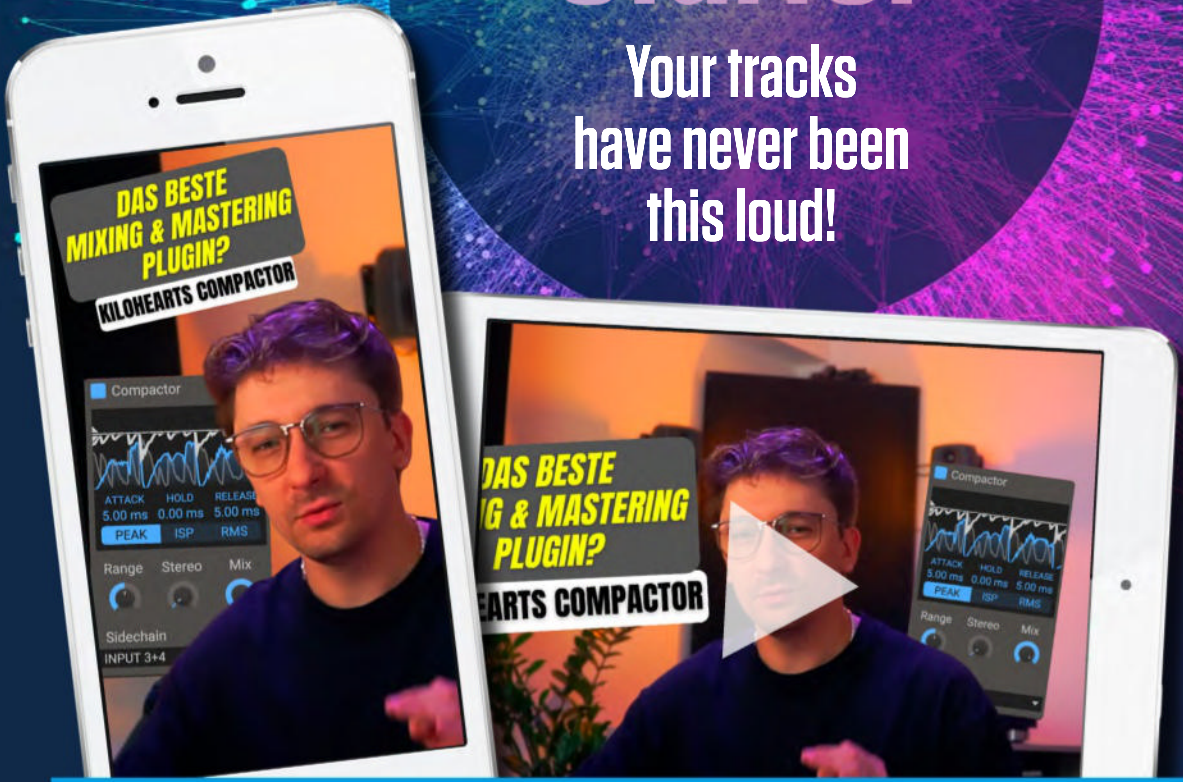


6 Panning and Delay

If you pan both signals in the Mixer, the Glitch sounds will fly around your ears. To prevent the two sounds from being too choppy and separate, I added a Mod Delay Module behind the Mixer, whose Mod Input is slightly modulated (2%) by an LFO for LoFi vibes, causing the delay lines to wobble a little.

Song Starter

Your tracks have never been this loud!



Take a look at YouTube and get inspired

www.youtube.com/
@BeatMagazin

Unfortunately, your muse isn‘t available at the touch of a button – but inspiration is! From now on, in cooperation with the EMS - Electronic Music School, we will be providing you with fresh Song Ideas, Track Templates, Samples and MIDI files every month as a creative injection that will surely give you new ideas. This will inject a breath of fresh air into your routine or take you down completely new musical paths. Whether you‘re a fresh Beatmaker or an experienced Soundsmith, you‘ll find what you‘re looking for here! **by Jeyênne**

Admittedly, the headline is a bold statement, but ultimately it‘s true because Adrian has discovered a particular piece of freeware that caught his attention and immediately won his heart: Kilohearts‘ Compactor.

He even considers this ultra-fast compressor revolutionary because it can work extremely inconspicuously and doesn‘t start to distort even at release times of 0 ms. When applied to all tracks in the mix, this creates significantly more headroom than when using the usual sidechain, which means your track can be Mastered much louder.

You can find the video on our YouTube channel, along with a link to the freeware. ⁞⁞

THE AUTHOR

At the EMS - Electronic Music School, you will learn everything from composing and producing Electronic Music to DJing and marketing your own tracks - exclusively from professionals working in the music industry.. The aim is to help you produce and sell Electronic Music professionally. Create club-ready tracks to current standards, optimize your DJ gig and live act and get off to a successful start. The focus is on providing personal support with an individual approach, from the start of a production to the professional music business. With branches in Berlin and Cologne, as well as our online offering, the EMS offers preparatory courses, workshops and individual coaching for aspiring Music Producers, DJs and Artists.

The EMS is more than just an ordinary music school - it is authentic and close to the industry - an Artist Network of Producers, DJs and Musicians.

Hands-on Extra: Bitwig Studio 6

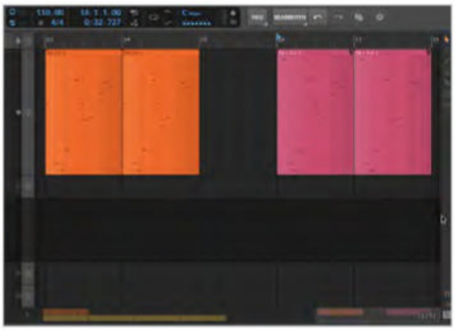
Fast arranging with alias clips

Alias clips have been around in DAWs for ages. Cubase and Logic introduced virtual clip copies many years ago; and in Bitwig, they came with version 6. For those who produce mainly clip-based music, this new feature is a blessing. With just a few steps, you break out of the 8-bar loop, distribute ideas in your arrangement, and still have the opportunity to easily edit the vibe of any melody and beat throughout the song. **by Laura Emiliano**

Project info:

Material: Bitwig Studio 6
Time required: 30-60 minutes
Content: Alias clips for faster production
Difficulty: Advanced to Pro

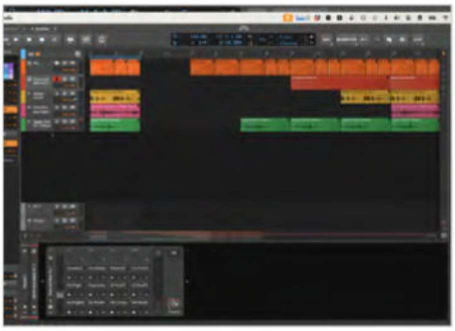
Audio Demo



1

Alias vs. Copy

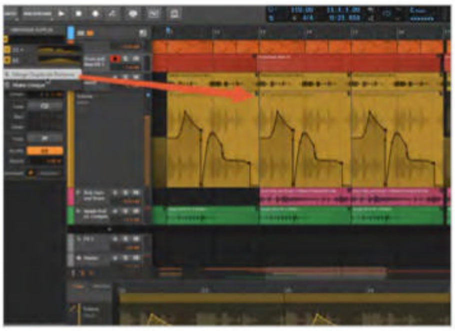
For those who are new to this topic: What exactly is the difference between copies and Alias Clips? Simply put, each copy of a clip stands on its own. If I change notes or automation in one clip, it remains unchanged in the other. With alias clips, any change made to the Master Clip is immediately transferred to all linked clips.



2

Melody Maker

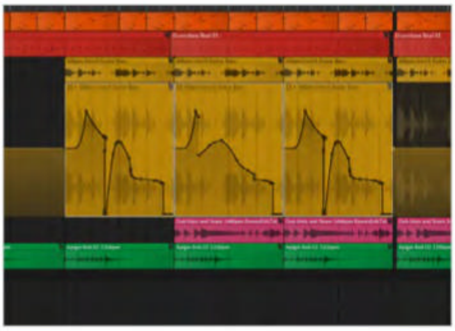
Our enemy, the 8-bar loop that we can‘t escape from, can be excellently defeated with Alias Clips. When you expand the 8 bars to maybe 3-4 minutes and song parts by deleting and adding instruments, you can change the main melody or groove in the entire track at any time using Alias Clips.



3

MIDI, Audio, Automation

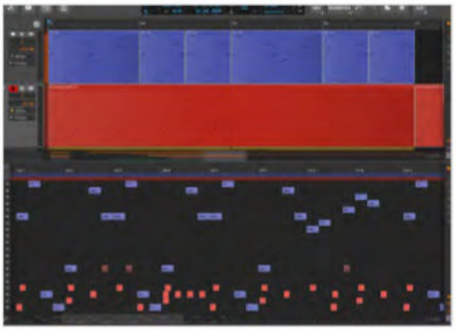
Not only can audio and MIDI data be distributed across the track using Alias Clips, but automation can also be assigned using the new Automation Clips. The following applies to all of them: What you change in one clip in the Alias Group will appear in every other clip. **Merge-Duplicate Patterns** is the name of the Alias function, while **Make Unique** does the opposite.



4

Make Unique

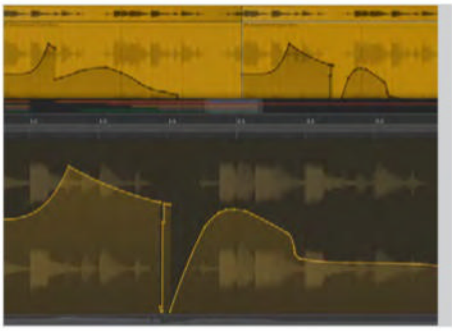
This second function is essential for Alias Clips that you want to exclude from the Alias Group and the associated changes. **Make Unique** does exactly that. You can also distribute a melody across the whole song and then uniquely adjust each clip, depending on what the arrangement requires.



5

Multi-Layer Editing

A second workflow boost that has become much more accessible helps with adjusting melodies and rhythms: Multi-layer Editing. If you select two clips on top of each other on different tracks, their contents are both displayed in the Editor. This makes it easy to match Kick and Bass notes to each other—and in all Alias copies at the same time!



6

Adjusting Automation

Automation clips can also be viewed in the Editor simultaneously with audio data and MIDI notes. This allows you to more quickly find the perfect timing in the beat where the Cutoff should open, the Volume decreases, or the Reverb is no longer heard. What used to be a bit fiddly is now a great boost for production and mixing!

Hands-on Extra: Bitwig Studio 6

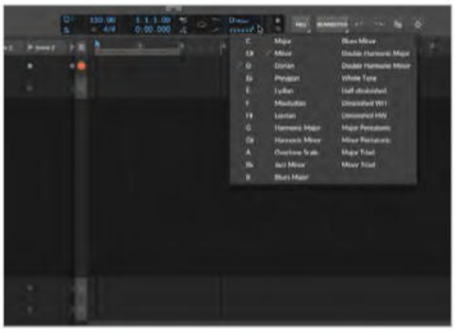
Tools for Perfect Harmonies

The knowledge required to master music production is extensive. However, regardless of the DAW used, music theory is one of the most common stumbling blocks for Producers. Finding the right chords to accompany a melody or even staying in a key is one of the biggest challenges. Bitwig Studio 6 provides fantastic new tools to help you find harmonious combinations more quickly. **by Laura Emiliano**

Project info:

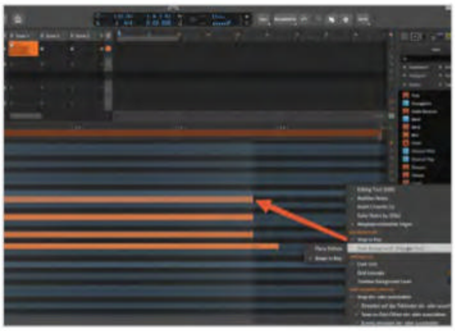
Material: Bitwig Studio 6
Time required: 30-60 minutes
Content: Produce faster with the new Note FX and Global Key.
Difficulty: Advanced

Audio Demo



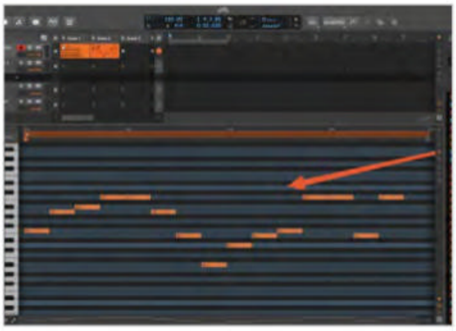
1 Major or Minor

One thing Bitwig, like almost any other DAW, cannot do even in Version 6: Automatically detect a key from a melody or chord progression. What is possible, however, is to set a key from the outset in the Bitwig transport bar. Major or minor—the 23 tonalities cover most of it, and I have set it to D minor.



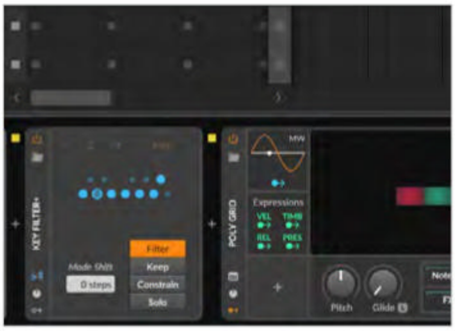
2 In Key

Once the key is set, the DAW offers a range of tools to remain harmonically in this key. In the piano roll, the seven note lines of the notes belonging to the chosen scale can be color-marked. And if you already have notes in the clip, Bitwig marks those that do not belong to the scale via Snap to Key.



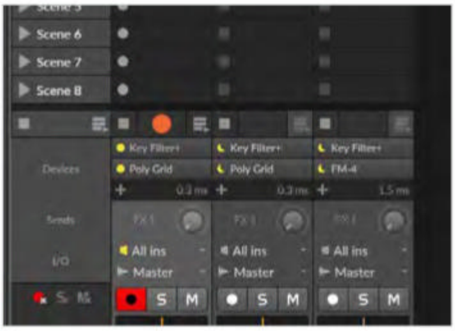
3 I Can Spray Can

The new Spray Can Tool makes it even easier to quickly generate arpeggios and melodies in combination with the “Snap to Key” function. When this function is activated and you hold down the ALT key while painting notes with the Spray Can, the MIDI notes are set in the selected grid, and only on the notes belonging to the key!



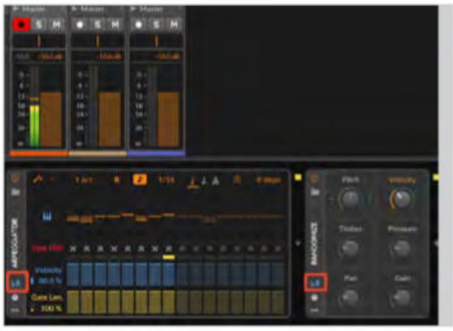
4 Key Filter+

The most helpful tool for quick adjustments is Key Filter+. The Note FX (that is, before the instrument) offers four options for handling notes that are out of key in MIDI clips. The notes can be passed through, muted, corrected, or passed through as the only ones. This allows even old projects to be quickly adjusted to a key.



5 Workflow

Therefore, my recommendation for smoother work for everyone who struggles to stay in key while composing is: Make it a habit to set a key and simply always apply Key Filter+ as the first Note FX in each MIDI track. That way, you don‘t have to think even more while playing or programming!



6 Echo, Arp and More

Five Note FX can be influenced by the set key: Arpeggiator, Echo, Multi-Note, Note Transpose, and Randomize. In each module, there is a Use Global Key button at the bottom left. When activated, arpeggios, note echoes, or random notes are always generated in the set key, creating fewer unwanted dissonant tones!

Kurzweil K20 series

This is how legends sound ...

Kurzweil has been a staple in the keyboard world since the early 90s. With the new K20 series, the legendary V.A.S.T. engine is back in the spotlight – with new features and plenty of computing power. We took a closer look at these synths and are thrilled! Why? We'll show you here ... by Marco Scherer

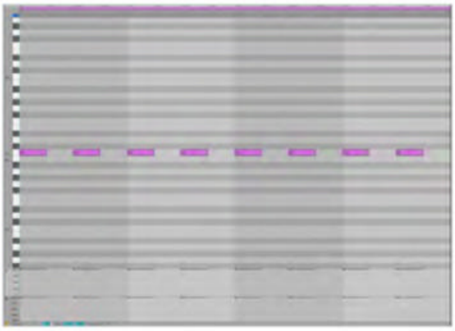
The Kurzweil K20 series is the result of over 30 years of development of V.A.S.T. technology, perfected through generations of proven K2 synthesizers. The V.A.S.T. synthesizers, K2061 and K2088, combine modern industrial design with an extensive factory sound library of over 2000 programs and more than 500 multi-combinations, organized into 13 instrument categories and including many classic synthesizer sounds from the K2 era. With 32 customizable layers per program, massive polyphony, and a variety of creative controls, the K20 series allows you to create rich and nuanced sounds ranging from V.A.S.T. classics to unprecedented soundscapes.

KURZWEIL
V.A.S.T.
KURZWEIL

Can Kurzweil do Techno, too?

Kurzweil gear consistently lives up to its reputation: The combinations of synth and sampler are considered complex and are loved by a dedicated fanbase for their versatility. Everything is included in the sounds, and if that's not

V.A.S.T.
1075 2' Diapason



1 V.A.S.T. almost equal?

The Kurzweil synth/workstation boasts V.A.S.T. technology, which actually stands for Variable Architecture Synthesis Technology, but could also be interpreted as an allusion to the English word "fast." This certainly rings true when using the instrument, as we have yet to encounter such a versatile workstation that can switch presets in milliseconds.

2 Presets in eighth notes

There are virtually no loading times, making it ideal for live keyboardists. Just a moment ago it was synth bass, now it's orchestral strings in memory. Let's take this to the extreme by sending an eighth note sequence to the synth and diligently turning the Preset knob. Listening through the presets makes this idea too tempting to resist.

3 Tempo recording

We've recorded a short video for you, which you can find in the Downloads section and behind the QR code in the image. This technique also works with other synths, but you may need to reduce the tempo or send quarter notes if the loading times for your model are different or the sounds fade out more slowly.

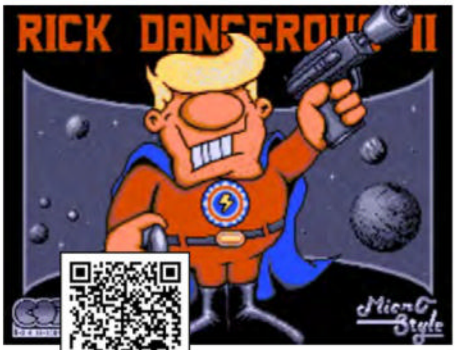
Who are these keyboards particularly suitable for?

1. Sound design & studio expeditions
The V.A.S.T. synthesis, 32 layers per program, FM, VA, and sampling engines, as well as the extensive effects enable complex soundscapes – ideal for Film, Ambient, post-production, or experimental sound design.

2. Live performances & gigging
Thanks to FlashPlay without loading times, fast program changes, plenty of controllers including ribbon, these synthesizer workstations are solid live instruments, especially in the compact and more travel-friendly 61-key format.

3. Composers & band keyboardists
The multitimbrality featuring 16 zones, arpeggiators, sequencers, and riff generators offer creative possibilities for structuring songs both in the studio and/or on stage.

4. Vintage fans & nostalgics
Those who appreciate the classic sounds of K2000–K2700 get them here – including DX7 compatibility and KB3 organ with realistic drawbar simulation.



www.beat.de/ricK20

Some of you may find this image familiar. We simply couldn't resist because the very first sound played from the K2088 – preset 162 Low Brass Chorale – immediately reminded us of the game classic from back then. We have modified it a ‚little'... take a listen!

More info about the K20 series.

K2061
K2088

VERDICT

The Kurzweil K2061 and K2088 are not copies of classic Japanese workstations and, in my view, are not direct competitors to the Nord keyboards, which are particularly designed for live and band use, but independent synthesizer all-rounders. Kurzweil combines various powerful synthesis forms and ‚playability' in a package that is recommended for sound designers, live musicians, composers, and vintage fans alike. The new Kurzweil keyboards share the strengths of the V.A.S.T. philosophy, but appear more compact, thoughtful, and accessible than a K2700.

The path to sound design requires some familiarization, as the V.A.S.T. architecture remains complex; however, the reward is enormous flexibility and inspiration. Those willing to take this hurdle will receive a robust tool that is technically solid, creatively immensely rich, and a reliable and future-proof companion for many areas of application.

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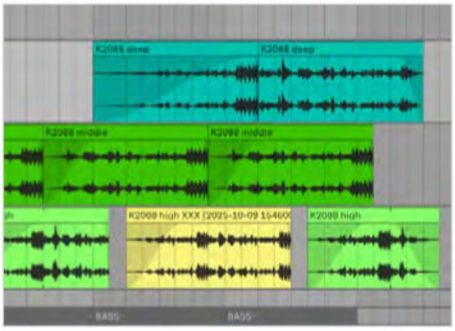
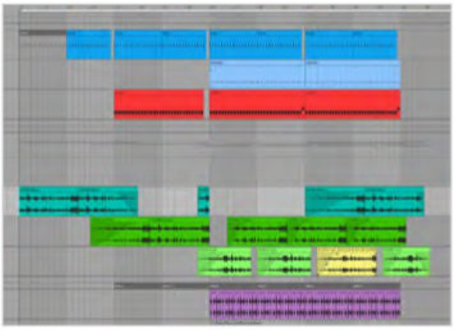
enough, you can load your own samples. Boundless, in other words. But in the end, does it also produce music? That's why we want to know if Kurzweil can do Techno, too ...



4 Build variations

With the recorded material, it's a piece of cake: We transpose one version down an octave and halve the tempo, version two remains original, and copy three is transposed up at double tempo. We also add Reverb and Delay to versions 1 and 3 and a Lowpass Filter to versions 2 and 3.



5 Add tops and bass

We let the Filter Cutoff modulate slowly and slightly via LFO, as otherwise the sounds would wear out. To start with, we add a simple off-bass and a top-end loop, and that's it. So, it's really simple. In contrast to the simple recording process, the result is a complex wall of sound that we created in just a few minutes.

6 Done!

We also have a video and an audio demo of the result, as well as the original recordings in the Downloads, so you can have fun with them, too, if you feel like it. Tip: In our demo, we simply used the recording several times ‚in a row'. It's also very appealing to split them into slices and vary the playback order.

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www.musiclab.com **Gift ID: F1585**

no additional costs

* Only while stocks last. Software is delivered as a download with a serial number.

Test: Ableton Live 12.3

Straight to the point: With stem separation, native Splice integration, smarter bounce workflows, and other updates, Ableton Live 12.3 feels like a full-blown major upgrade. The promise: less time from idea to finished track. Here’s how it performs for sketching, sampling, sound design, and arranging. **by Marco Scherer**

Features

- DAW
- Stem-Separation
- Splice-Integration in the browser
- Search with Sound
- Bounce Group, Bounce In Place
- Slicing to Simpler
- Expressive Chords
- A/B mix decisions
- More precise clip edits

Facts

Manufacturer: Ableton
Web: ableton.com
Distribution: Website
Price:
279 Euro (Standard),
565 Euro (Suite)

▲ Stem separation speed
▲ Splice-in-browser
▲ Bounce/resample
▲ Expressive Chords
▲ Quality of the stock effects
▼ Splice preview artifacts
▼ Stems bleed

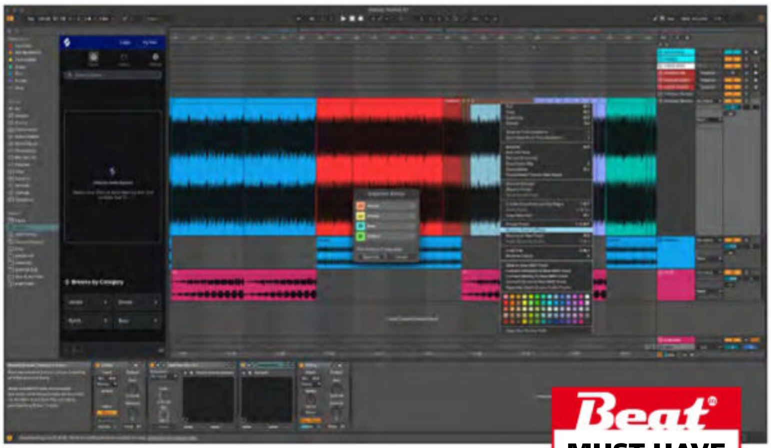
Features:	🟥🟥🟥🟥🟥🟥
Technology:	🟥🟥🟥🟥🟥🟥
Price/Perf.:	🟥🟥🟥🟥🟥🟥
Total:	🟥🟥🟥🟥🟥🟥

Alternatives

Bitwig Studio 5
399 Euro
bitwig.com

Logic Pro
199 Euro
apple.com

Studio One 6 Professional
399 Euro
presonus.com



Ableton Live 12.3 in action with stem separation and the Splice browser.

Beat
MUST-HAVE
12/2025

Live 12.3 has a clear agenda – fewer clicks, more music. And we’ll handle this review the same way: not much preamble, straight to the point – the new features ... Stem separation is the showpiece: right-click an audio clip and Live generates Drums, Bass, Vocals, and Other (the remaining sounds) as new tracks, automatically muting the source. For creative momentum, the results are precise enough to hold musically and clean enough to drop straight into the mix with a bit of EQ or gating. Whether rescuing a loop, building a remix foundation, or extracting hits for a sampler, “It would be nice to have the parts” becomes “Here they are.” Separation quality is very good for drums and bass, decent for vocals depending on density, and predictably “smeary” on stacked harmonics. Noise floors and bleed can be tamed with EQ/expanders.

Splice is now a built-in part of Live

The Splice integration feels like a true part of Live: filter by instrument, genre, BPM, loop vs one-shot, etc. The preview runs in sync with the song but sometimes contains artifacts. Once you drop the sample into the timeline, it loads in high quality. The real value comes with the feature called “Search with Sound.” You drop sound snippets into the dedicated field – drums, pads, or a melody – and Splice returns sonically similar candidates, optionally matched to key. You can like Splice or not, but the feature works impressively well and is an absolute producer turbo. A separate Splice subscription is required, however, and is not included in the price of Live.

Bouncing and resampling

Copy a clip, paste it into a new audio track – and you get rendered audio. No dialogs, no detours. Bounce In Place and Bounce Group are noticeably faster and more robust, so you can render effect chains to audio without breaking the flow. That encourages faster commitment: resample a chopped Simpler performance take, tame transients with gates and clip fades, layer with the stem-separated drums – and your own touch is done. A practical workflow could look like this: split a loop with stem separation, slice the drum track to Simpler, record a live finger-drum take at double speed, then warp with Texture to bend the feel. Bounce via “paste to audio,” nudge micro-timing, and add more width and movement with Harmonic Tremolo.

Auto Pan becomes Tremolo

A comparatively small update, but apparently often requested: Auto Pan morphs into Auto Pan Tremolo with syncable shapes, phase control, envelope sensitivity for dynamic response, and a nicely colored Vintage mode. The highlight is Harmonic Tremolo: lows and highs are modulated differently – for that chewy, amp-like movement that flatters keys and pads. Expressive Chords now learns your own voicings into a chord bank and shows the notes as you play them in. Per-slot transposition allows targeted adjustments without destroying the relationships in the rest of the progression. Subtle UX fine-tuning that, in practice, leads to bolder harmony – especially combined with scale highlighting and clip-level MIDI transforms. Day-to-day mixing also benefits from small but noticeable upgrades: on devices you can now “A/B compare” two different presets, and after separation, clip fades and crossfades grip transient-heavy material more tightly.

Verdict

At first glance, the Live 12.3 update isn’t a revolution – some other DAWs have had comparable features for a long time – but the new additions integrate seamlessly and noticeably accelerate your workflow. Stem separation rescues session ideas and sparks new ones. Splice in the browser shortens the search-audition-drag loop-procedere. The bounce/resample optimizations remove the sand from the gears. Auto Pan Tremolo earns a permanent spot on pads, keys, and buses. None of this is unique, but together it’s a measurable speed boost from idea to arrangement. Plus, the update is free – so it’s a no-brainer anyway.

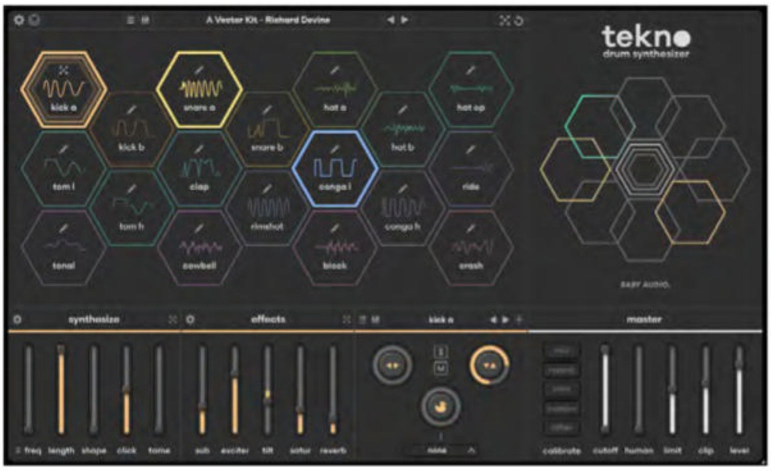
Live 12.3
What ore?

More info

Test: Baby Audio Tekno

Baby Audio has never been a manufacturer of boring tools. Each of its plug-ins brings a fresh idea to the table. With Tekno, the software company, together with developer Jatin Chowdhury, is taking the next step with a drum synth that makes you wonder why something like this hasn‘t been around for a long time.

by Vera Schumacher



Tekno is a real statement: A drum synth that combines nostalgia and modern sound design ideas and inspires quickly.

Behind each of the 18 hexagons is a complete drum synth, equipped with individual parameters and effects. Kicks, snares, rimshots, hi-hats, crashes, rides, toms, claps, and percussion sounds such as cowbell, block, conga, and tonal can be modeled from scratch, with each playback varying slightly due to the use of analog modeling.

This is a crucial difference to static one-shots, which makes grooves more lively. Each drum synth comes with five sound-defining macro controls: Pitch, length, shape, click, and tame for the bass drum, for example. For the nerds among us, there are additional options for each voice in the calibration menu. In addition, each hexagon has tuned effects with five controls and its own calibration section. With parameters such as resonator feedback, rumble, and transient shaping, Tekno goes much further than what you would expect from classic drum machines. The highlight: Even the five macro controls deliver powerful, musical results, while you have all the possibilities for sonic escapades at your fingertips.

Ideas at the push of a button

The Randomizer system is a lot of fun: One click and the entire kit sounds completely new. Or you roll individual voices or effects. The Humanize control adds another layer by introducing micro-variations in timing and timbre - subtle for more groove or extreme for controlled chaos.

Of course, there are also features that we would still like to see. An integrated sequencer would have elevated Tekno to the level of a full-fledged drum machine, and dynamic timbre control through velocity would allow for even more expression. It would also be useful to have the option of fixing certain elements during randomization and macro controls that control the decay value of all drums, for example. Nevertheless, this plug-in is already a highly inspiring tool that opens up new avenues for producers of Techno, Trance, House, Electro, Pop, and more.

And the sound?

The drums in Tekno sound crisp, raw, and punchy coming out of the speakers. From powerful club kicks to metallic, cutting hi-hats and experimental percussion, the synth covers an impressive spectrum. The basic character always remains powerful and organic, with that slight unpredictability that is otherwise only associated with old hardware. In some cases, the sounds produced are reminiscent of analog legends such as the 808 or 909, but the extensive settings and effects also allow you to quickly create modern sounds for Techno and other electronic genres. Ingenious: You can export drums that you particularly like as audio files, including effects, in a flash using drag & drop and then edit them further in a sampler.

Saturation, compression, exciter, reverb, and more significantly shape the sound character. The Master section featuring Clipper and Limiter ultimately ensures that the drums assert themselves in the mix. Excellent: There is even a Ducker that allows sidechain compression between different drum channels.

Verdict

With Tekno, Baby Audio delivers an instrument that honors old drum machines without imitating them, while sounding fresh, powerful, and forward-looking. If you want to not only replace your electronic drums, but really shape them, you‘ll find a new sparring partner here. Tekno welcomes beginners with a wide range of presets and allows experimenters to delve deep into the sound. The instrument impresses with its powerful and assertive sound.

From massive kicks, punchy snares, distorted claps and metallic hats to weird, almost acoustic-sounding Percussion, it‘s all there. If you love beats with character and grit, you should definitely give it a listen and be prepared for a synth, of all things, to end your search for the perfect sample. ⁘

More Info

Features

- 18 analog drum engines
- Over 70 kits & 1300 drum presets
- Flexible adjustment options
- Effects and master effects
- Randomize and humanize functions
- Scalable GUI with undo
- Drag & drop audio export
- VST2, VST3, AU, AAX, standalone

Facts

Manufacturer: Baby Audio
Web: babyaud.io
Distribution: Website
Price: 129 US Dollars, Introductory price: 79 US Dollars

▲ Vibrant analog sound
▲ Flexibility
▲ Strong effects section
▲ Drag & drop export
▲ Randomize and humanize functions
▲ Large preset library
▼ No integrated sequencer
▼ No velocity-dependent timbre modulation

Operation: ■■■■■□
Sound: ■■■■■◧
Price/Perf: ■■■■■◧

Overall: ■■■■■◧

Alternatives

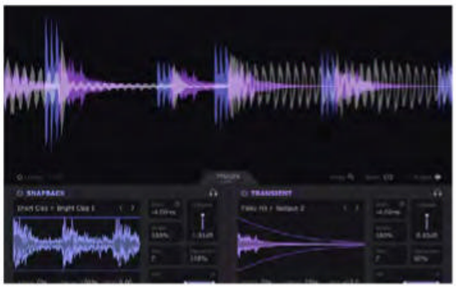
Sonic Charge Microtonic
99 Euro
soniccharge.com

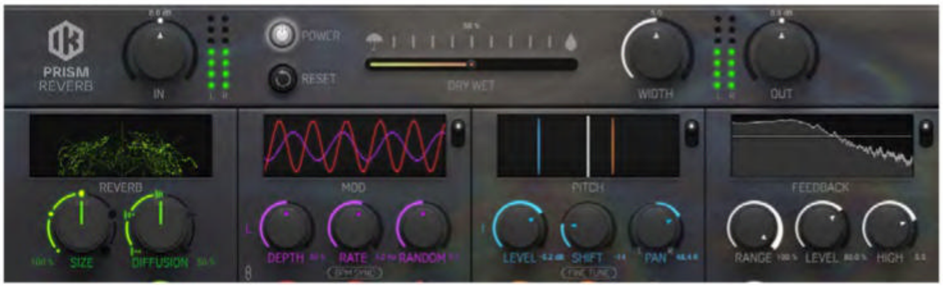
Sugar Bytes DrumComputer
129 Euro
sugar-bytes.de

Rob Papen Punch 2
149 Euro
robpapen.com

New Effect Plugins

by Vera Schumacher





Cableguys
Snapback

Bringing drum sounds to life usually involves a lot of tinkering with samples, layering, and effects. With Snapback, Cableguys and BT now offer a tool that aims to radically simplify this process. Instead of laboriously stacking Kicks, Snares, and Claps, you simply load the plug-in as an Insert on the respective drum track, and each hit automatically gets a precisely triggered layer. What's special about Snapback is that it can not only enhance your drums with transient layering, but also incorporate samples such as vinyl noise and Foley effects before the actual hit, which can give Claps or Snares significantly more life and stereo width.

The plug-in is easy to use and practical. The waveform display shows exactly how the original and layer interact, while Detail View makes it easy to precisely adjust Phase, Attack, and Decay. In addition, there are Filters, Pitch, Stereo Width, and Dynamics controls. Over 200 sounds from BT, Goldbaby, Virtual Riot, and Cyclick are included; and you can also import your own samples. Thanks to MIDI Out, the triggers can even control external instruments.

Verdict

A small sound design tool with a big impact: Instead of endless sample manipulation, Snapback Drums quickly and conveniently adds depth and expressiveness that quantized beats often lack. Those who frequently layer drums will also discover new sonic possibilities that go far beyond standard processing. Thanks to its clear operation, precise visualization, and high-quality sound material, the plug-in delivers results in no time that would otherwise require significantly more effort.

Developer: Cableguys
Web: cableguys.com
Price: 49 Euro
Format: VST2, VST3, AU, AAX

Rating: 🟥🟥🟥🟥🟥◧

IK Multimedia
Prism Reverb

Does the world really need another reverb plug-in? While other reverbs primarily aim to reproduce realistic spaces, Prism Reverb takes a different approach: It's designed as a sound design tool for lively, shimmering, and experimental reverb tails—perfect for Ambient music, film scores, or for guitarists who love cinematic expansiveness. The user interface is divided into four sections: Reverb Core, Modulation, pitch shifting, and feedback, which can be deactivated individually. The first section is the Reverb module, which determines the basic character of the reverb with parameters for Size and Density, as well as low and high pass filters. Even here, it's clear that Prism Reverb takes a unique approach: At low densities, the reflections stand out clearly, while at higher values they merge into dense layers. Next comes the Modulation section, which provides movement. The amplitude modulation works independently of the channel, allowing you to adjust the depth, rate, and random values. This results in irregular, organic-sounding movement.

No Shimmer effect without a Pitch Shifter. In the corresponding module, you will find two independent shifters with a range of up to two octaves up and down and adjustable fine tuning. In addition, the level and pan position can be controlled. This allows for subtle tonal shifts as well as sparkling shimmer cascades. When combined with the Feedback section, things get experimental: The signal can be fed back, shaped using frequency shaping, distorted using Pitch in the loop, and the channels can be swapped with Flip at each repetition. The result is evolving textures that constantly reveal new facets.

In testing, Prism Reverb impressed us with its high sound quality and surprisingly low resource consumption. This invites experimentation and real-time sound tweaking, which doesn't always work without artifacts in many reverb effects. With Prism Reverb, on the other hand, you can also automate the effect parameters to create captivating tension arcs. As usual with IK Multimedia, there are plenty of musically useful presets on board for guitars, basses, piano and keyboard sounds, vocals, effects, and much more. A well-designed preset browser and a comparison function between four versions, as well as undo and redo, ensure a high level of user-friendliness. However, the Feedback section is very complex and requires some familiarization before its possibilities can be used intuitively. The presets could also be more diverse, but that's all the more reason to delve deep into sound design yourself. A clear wish for future updates: An integrated ducking function so that lush reverb effects can also find their place in the mix. And while we're at it: A reverse function would also be cool.

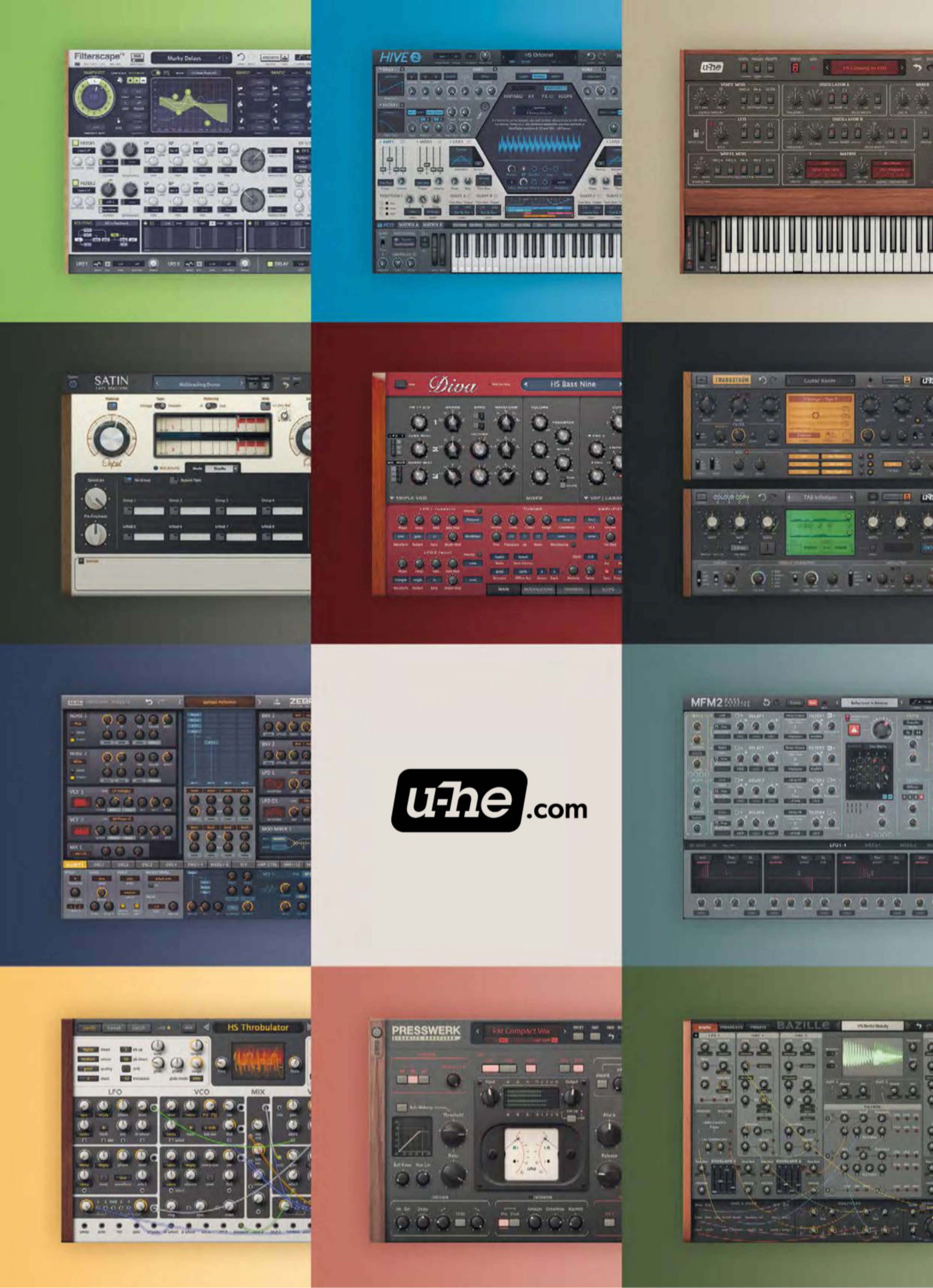
Prism Reverb can be used as a standalone plug-in or within the T-RackS environment. It's here that it really comes into its own: When combined with the suite's classic reverbs or effects such as Tape Echo and Saturation, it creates hybrid soundscapes that would be almost impossible to achieve with a single plug-in.

Verdict

With Prism Reverb, IK Multimedia presents not an all-purpose reverb, but a specialized sound design tool. Instead of simulating realistic spaces, it transforms even simple signals into dense, breathing soundscapes that change organically. Guitars become floating pads, orchestral instruments become distinctive drones, and vocals become ghostly choirs. The plug-in's strength lies in its ability to add movement and depth to static sounds—perfect for Ambient, Chillout, Downtempo, and Film Music. If you're looking for inspiration beyond classic reverbs, you'll find a tool with its own character here.

Developer: IK Multimedia
Web: ikmultimedia.com
Price: 95 Euro
Format: VST3, AU, AAX

Rating: 🟥🟥🟥🟥🟥☐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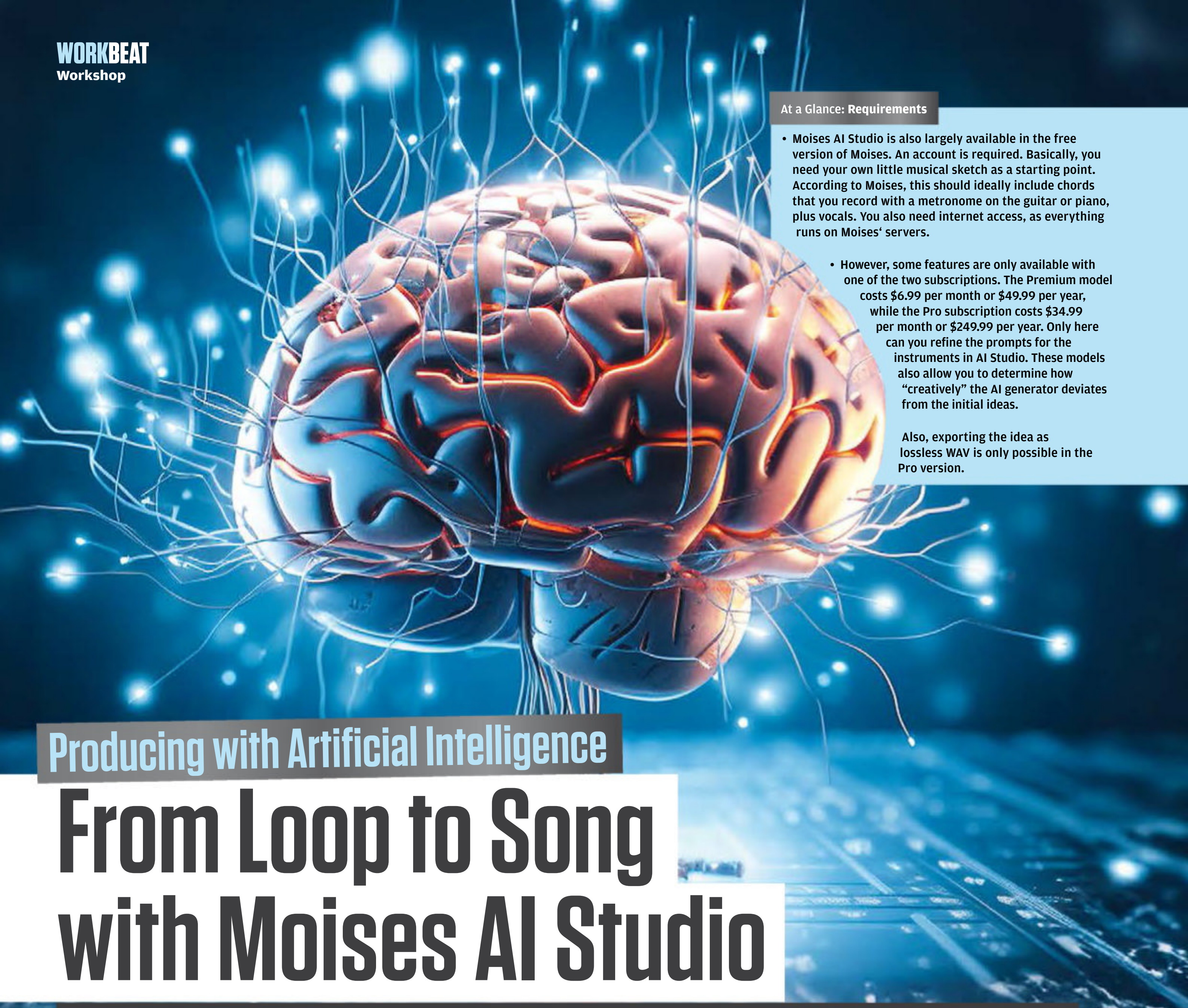


Producing with Artificial Intelligence

From Loop to Song with Moises AI Studio

We already featured Moises as one of the leading stem separators (also found in Ableton 12.3) in one of the first episodes of our AI series. Recently, the Moises AI Studio introduced a new level of AI-assisted production. The idea here is to use your own audio snippets like a guitar riff or piano chords as a starting point and have the Moises AI find matching instruments, melodies, and rhythms, thus, breaking out of the loop becomes even easier ...

by Laura Emiliano

Moises is a heavyweight in the world of stem separators. Early on, in addition to the ability to split audio material via the website, the company focused on dedicated apps for iOS and Android. It also integrated smart features that made learning songs easier, such as Tempo, Chord, and Key detection, an online Mastering service similar to LandR, and a voice converter called Voice Studio.

The idea must come from the user

This expertise has been combined in AI Studio in a new tool for developing musical ideas. The basic idea: Unlike completely self-sufficient AI generators such as Suno or Udio, the initial musical idea must come from the user. In other words, it needs a short sketch, a noisy voice memo recording with guitar and vocals, for example. Moises AI Studio then offers several tools that can be used to develop the idea further. At the touch of a button, harmonically and rhythmically matching loops with Drums, Bass, Guitar, Electric Piano, and Strings can be generated for recording. Moises can either adjust their style based on the recording or you can choose from one of the genres offered.

Moises AI Studio also integrates their in-house Stem Separator. This allows you to extract the vocals from the demo and soon take it one step further. The aforementioned voice converter can also be used here to turn the shaky demo vocals into a professional-sounding studio singer. The demo project can then be automatically Mixed, Mastered, and exported with Moises AI Mixer.

To set expectations: Moises AI Studio is a great tool for those who want to rearrange a short voice memo recording with vocals and guitar or piano. A single synth or drum loop or an acapella can also serve as a basis for quickly sketching out a song idea. In terms of editing options, such as cutting and copying audio and building a song structure, AI Studio is still quite limited and cannot compete with fully equipped DAWs: No MIDI export, no automation, no external plugins, everything online, so Moises AI Studio is not a replacement for a DAW. Nor does the tool want to be. However, as a source of ideas for songwriters and producers, AI Studio can sometimes help you get out of creative ruts faster than the umpteenth plugin.

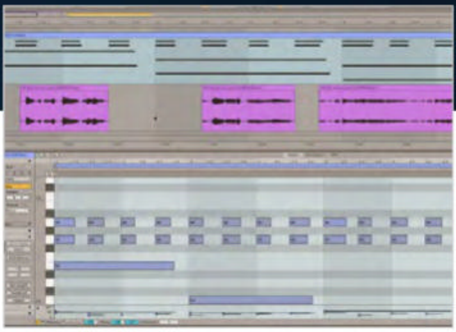
More Info

At a Glance: **Requirements**

- Moises AI Studio is also largely available in the free version of Moises. An account is required. Basically, you need your own little musical sketch as a starting point. According to Moises, this should ideally include chords that you record with a metronome on the guitar or piano, plus vocals. You also need internet access, as everything runs on Moises' servers.

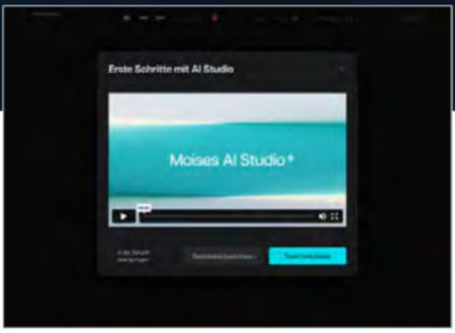
- However, some features are only available with one of the two subscriptions. The Premium model costs $6.99 per month or $49.99 per year, while the Pro subscription costs $34.99 per month or $249.99 per year. Only here can you refine the prompts for the instruments in AI Studio. These models also allow you to determine how "creatively" the AI generator deviates from the initial ideas.

Also, exporting the idea as lossless WAV is only possible in the Pro version.



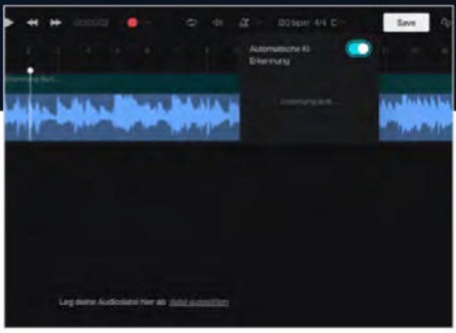
1 Piecework

According to the instructions, Moises AI Studios‘ AI model works best with source material that includes a “chord bed,” that is, a basic musical idea consisting of two, three, or more chords, accompanied by vocals. For this, I used a MIDI clip from Ableton Live for the piano as a basis, along with a vocal loop that was as dry as possible.


Erste Schritte mit AI Studio
Moises AI Studio

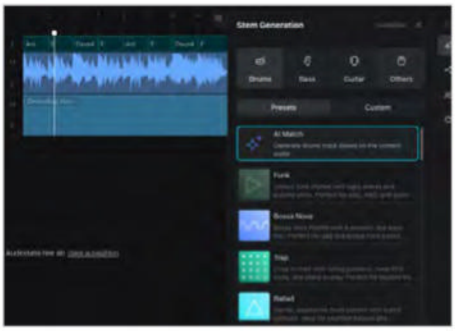
2 Upload and Go

In Moises AI Studio, start a new project and click on “Add Track” in the following window to upload your demo to Moises AI Studio. This will take you to “My Files,” where you can open an Explorer/Finder window and navigate to the location of the audio file. With one click, the demo will appear as the top track in AI Studio.


Save
Automatische KI-Erkennung

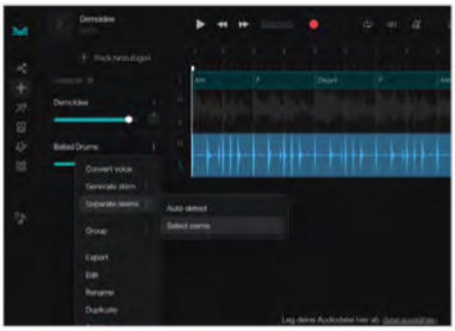
3 Speed and Key

Before we add Drums, Bass, and any other instruments, we advise you to use Moises‘ automatic tempo and key detection to ensure that the AI correctly recognizes the source material. This can be done at the top under “120 bpm 4/4 C.” Clicking on it opens the “Automatic AI Detection” window, which you can then activate with a click.


Stem Generation
Drums
Bass
Guitar
Others
Presets
Custom
AI Match
Funk
Bossa Nova
Trap
Ballad

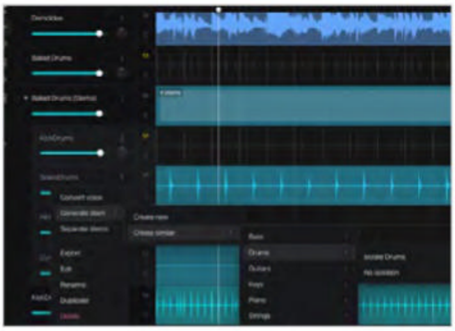
4 Drums, Drums, Drums

Let‘s start with the drums. Click on „Add Track“ at the top left and then on „Generate AI Instrument.“ Here, you now have the choice between different genres or „AI Match,“ where Moises AI Studio attempts to generate drums that best match the source material. Click „AI Match,“ then „Generate Stem“ at the bottom.


Demoidee
Ballad Drums
Convert voice
Generate stem
Separate stems
Auto detect
Select stems
Group
Export
Edit
Rename
Duplicate

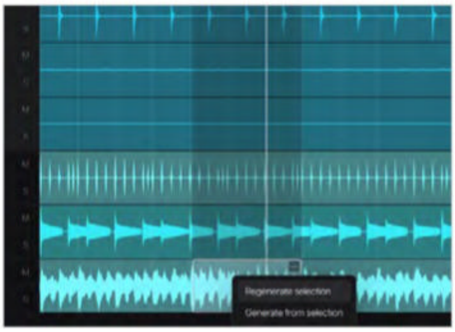
5 Drum Stemming

A new track is created under the demo recording, and the AI takes an average of 40 seconds to generate the instrument. But what if the beat is groovy and you only want to change the kick, for example? Using the “Separate Stems” function, then “Select Stems,” you can have Moises first break down the groove into its components.


Create new
Create similar
Bass
Drums
Guitars
Keys
Piano
Strings

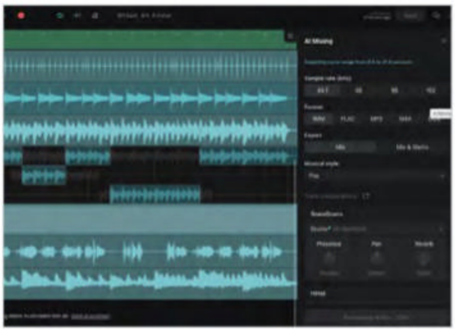
6 New Kick on the Block

„Auto Detect“ rarely works. So choose „Select Stems“, then select the desired individual instruments on the right and off you go. Kick, Snare, Hihat, Crash – four individual tracks. Now we can change just the Kick with „Create Similar“. You can also create a Bass track, again with „AI Match“.


Regenerate selection
Generate from selection

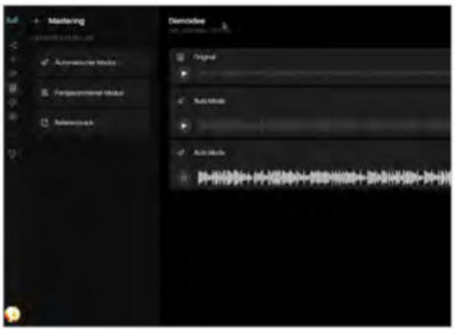
7 New Takes

Strings fit the melancholic atmosphere of the demo, and these are also generated by the AI. But what if, for example, only the chords in the third bar need to be changed? Select the part of the stem that needs to be changed by clicking and dragging, and select “Regenerate Selection.” This allows you to improve and optimize every instrument in the project.



8 Let Them Mix

AI Studio also helps with mixing. “AI Mixing” analyzes all tracks, suggests a genre whose tonal foundations are used for AI mixing, and allows final adjustments to be made for Volume, Panning, Presence, and Reverb (unfortunately not previewable). After mixing, a zip file with stems and mix is automatically downloaded.


Mastering
Demoidee

9 Mastering

Unfortunately, the AI mixer is not automatically transferred to Moises‘ Mastering Section, but you can still use it for the final loudness adjustment after downloading the mix. After uploading, Moises suggests a reasonably loud Master that gives you a better idea of the potential of the first demo.

Test: ACE Studio

While AI-driven instruments have long been part of everyday life, singing has remained the most difficult discipline. ACE Studio wants to change that – with cloud-based deep learning, more than 80 AI voices, and astonishingly realistic results. Will the tool succeed in bringing a breath of fresh air to virtual vocals? **by Vera Schumacher**

Features

Cloud-based vocal synthesizer

Over 80 royalty-free AI voices in 6 languages

DAW integration via ACE Bridge 2 (VST3, AU, AAX)

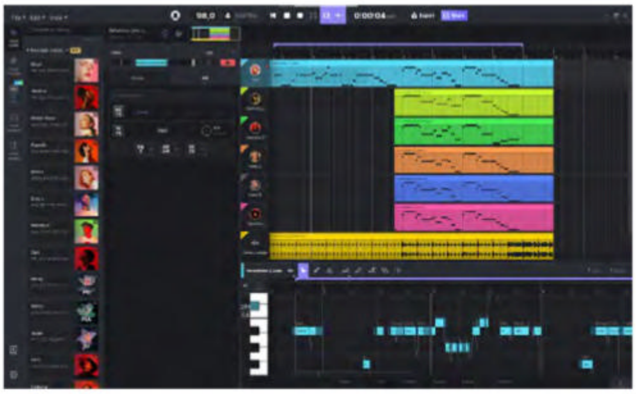
Facts

Developer: Accidental
Web: acestudio.ai
Price: From $17 / Month (Rent to Own) | Artist: $398 | Artist Pro: $528

▲ Realistic vocals
▲ Wide range of voices
▲ High-quality effects
▲ Custom models
▲ AI violin
▼ Limited variations
▼ Slow rendering

Sound: 🟥🟥🟥🟥🟥☐
Operation: 🟥🟥🟥🟥🟥☐
Price/Perf: 🟥🟥🟥🟥🟥☐

Total: 🟥🟥🟥🟥🟥☐



The clear interface of ACE Studio with piano roll and helpful tooltips makes it easy to get started. The voices sound musical and sit well in the mix.

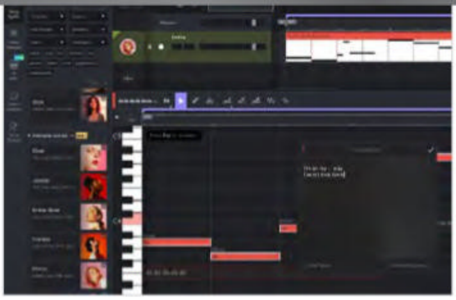
ACE Studio runs as a standalone app and can be integrated directly into your DAW via the ACE Bridge. The AI performs all calculations in the cloud, without the need for local libraries or high system load. Over 80 female and male voices in four languages cover genres ranging from Pop, R&B, and EDM to Funk, Latin, and Opera. Convenient: The entered text is automatically distributed across notes. This tool automatically controls expression and articulation. You can automate the parameters Breath, Air, Falsetto, Tension, Energy, and Formant in detail, but there are no global controls. An AI retake and transpose function for tracks would be useful additions.

Thanks to integrated effects, the voices sound high-quality and ready for mixing straight from the editor. The only downside is that the sound characteristics of individual voices can only be modified to a limited extent at this stage. On the other hand, the ability to train your own models using voice cloning is fantastic. The doubling functions and choir mode are particularly impressive, allowing you to create captivating polyphonic arrangements with just a few clicks. The community also provides inspiration with shared voices, samples, and song templates. In addition, there are practical extras such as AI Violin for realistic strings, Stem Splitter for extracting individual tracks, and the precise audio-to-MIDI function, which automatically creates melody and lyrics from a demo as an editable MIDI clip.

Verdict

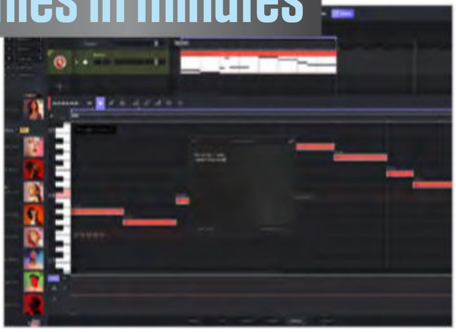
ACE Studio finally makes AI vocals suitable for everyday use, with intuitive operation and realistic sound. In terms of sound, the voices score points with clean intonation, natural phrasing, and expression. However, when it comes to delicate or rough voices, it's clear that the human character remains unmatched. Although there is still a lack of emotional depth here and there, and cloud rendering occasionally slows things down, the workflow, community content, and fun factor are impressive. Creating polyphonic arrangements is particularly inspiring. ⁘

Captivating vocal harmonies in minutes



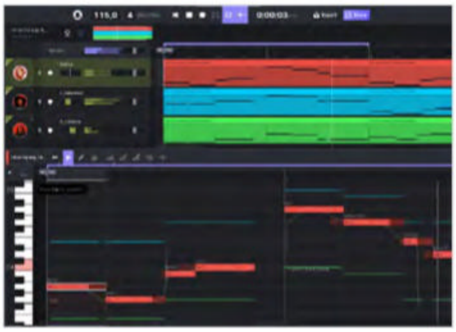
1 Melody & Enter Text

With ACE Studio, creating impressive vocal harmonies is a breeze. We use the standalone version of the software for this. First, create a clip on a track and program or play a melody. Select all notes, right-click on them, and then enter your text at **Edit Lyrics**. ⁖



2 Create Doubles

The virtual singer now sings your melody. Adjust the notes and pitch parameters for the most realistic result to your liking. Now it's time to create appropriate harmony voices. Right-click on the clip and then click **Create Vocal Doubles**. Here, you can define the similarity of the doubles to the original. ⁖



3 Create Harmonies

ACE Studio now generates two harmony voices, initially with the same vocal voice and notes. In the piano roll, you can adjust the pitches. Try out third, fourth, or fifth intervals that complement the original melody. Are you satisfied with the result? Then be sure to experiment with the software's various voices. ⁘

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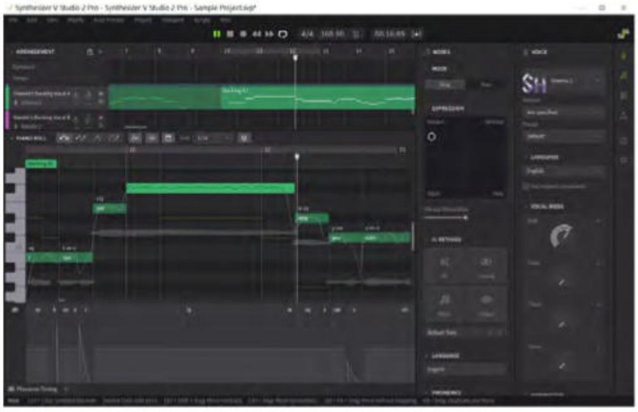
[1] There's no demo, but thanks to a money-back guarantee, ACE Studio can be tested for 7 days.

Test: Synthesizer V Studio 2 Pro

The idea of using software to create lifelike singing voices is no longer a dream of the future. With Synthesizer V Studio 2 Pro, Dreamtonics demonstrates how realistic AI vocals can sound today – sometimes so convincing that you have to listen twice. **by Vera Schumacher**

Visually, Synth V Studio 2 Pro resembles a compact DAW—with a piano roll, automation curves, and text fields. You can set notes, enter your text, and shape vocal parameters such as Pitch, Vibrato, Loudness, Tension, Breathiness, Gender, and Mouth Opening with automation curves. MIDI import, automatic text distribution, and tools such as the Expression Pad make the workflow fast and musical. One of the coolest features is the AI Retake function. With a single click, the software automatically generates alternative takes of individual notes or entire phrases – optionally for pitch, timbre, or timing.


With Synthesizer V Studio 2's Expression Pad, you can shape emotion per syllable, and even the timing and emphasis of phonemes can be edited.

Soundwise, very close

Synthesizer V is based on real, licensed singers and offers over 70 voices, from Pop to Rap. The vocal modes allow for fine character control: From breathy to powerful to aggressive. Singing or Rap, six languages, convincing English – so far, only German is missing. The new V2 voices sound airier, more dynamic, and significantly more natural than in the previous version; even quiet, intimate passages sound believable. Only when listening closely can you notice here and there that these are not real singers. In dense mixes or in polyphonic vocal arrangements, the illusion is often impressively close to the sound of real voices.

Verdict

Synthesizer V Studio 2 Pro shows how close AI vocals have now come to real singing. The results sound amazingly human, with expression and depth of detail. Thanks to a large selection of voices, deep editing, and features such as AI Retake, the plug-in delivers a remarkably musical performance. Those who invest time in fine-tuning will be rewarded with professional-sounding vocals—without the need for a microphone. Will the software replace real singers? Not quite yet. But for demos, backing vocals, or creative experiments, it's already a sure bet. ⁘

Features

AI-supported vocal synthesis with over 70 voices (one voice included) in 6 languages

VST3, AU, AAX, ARA, Standalone

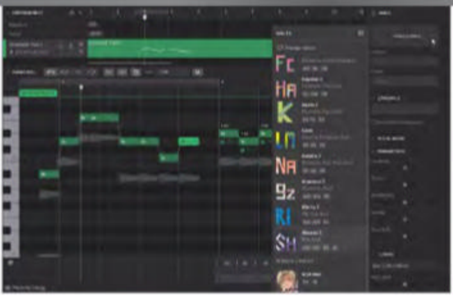
Facts

Developer: Dreamtonics
Web: dreamtonics.com
Price: $99 US Dollars (with one voice), 79 Euro per voice

- ▲ Musical AI retakes
- ▲ Fair price including one voice
- ▲ Fast, intuitive editing
- ▼ Additional voices cost extra
- ▼ German is not yet supported

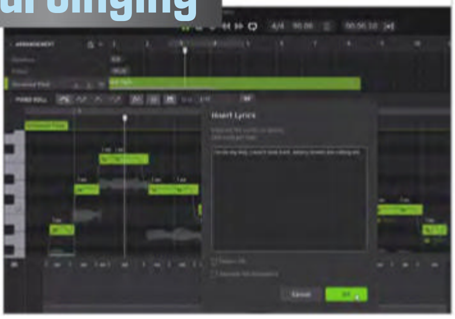
Sound:	■■■■■◧
Operation:	■■■■■□
Price/Perf:	■■■■■□
Total:	■■■■■◧

Your melody becomes real singing



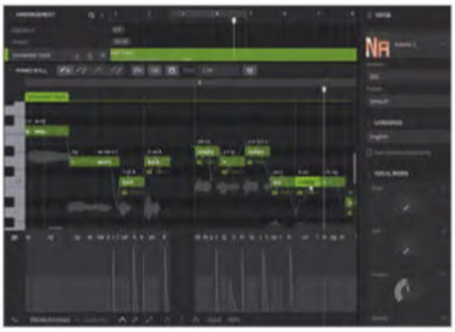
1 Creating Melody

Start the demo of Synthesizer V Studio 2 Pro [1] as a standalone version, create a new project at the desired tempo and draw your vocal melody in the piano roll or record it with your MIDI keyboard. Since the software doesn't know your text yet, it initially fills the notes with „la". Now select one of the virtual voices. ⁛



2 Insert Lyrics

And the voice sings your melody. Instead of laboriously typing syllable by syllable, you can insert your entire text: Mark all notes in the piano roll, click Modify: Insert Lyrics and input your lyrics. The software distributes the syllables automatically. For natural timing, a bit of fine-tuning on note length or timing might be needed. ⁛



3 Expression & Export

Tip: Polysyllabic words sound smoother when spread over multiple notes. For this, simply enter a „+" for subsequent notes. If you don't like a passage, mark it and select Generate a New Take. Refine expression via the Note Properties Panel and regulators like Warm or Powerful. Satisfied? Then export your vocals as an audio file. ⁘

Presets and audio demos in the magazine downloads (see page 9)

Hands-on: Recreate Top Chart Sounds

Dope Tracks

The desire to have that ONE sound at home, the one track that you can‘t get out of your ear, unites us as Producers. Listen once, turn the knobs, done. But transferring what you‘ve heard to the right parameters with the right values takes training. Every month on Dope Tracks, we feature two sounds from current hit songs - this month we feature Who‘s That by Ikkimel and No Broke Boys by Disco Lines and Tinashe.

by Julian Schmauch

Audio demo
Ikkimel

Audio demo
Disco Lines and
Tinashe

Project info:

Material: DAW, various plug-ins
Time required: 1 - 2 hours
Content: Reconstruct sounds of popular Pop & EDM tracks.
Difficulty: Advanced to Pro

Ikkimel - Who’s That (Prod by Robbensohn): Lead w/ U-he Hive 2

Photo: Four Music

1 Ikkimel and SXTN

Confident, aggressive, outspoken—the Berlin rapper duo SXTN caused a stir in the mid-2010s. Berlin-based Ikkimel continues in a similar vein. Escalation through the night, giving the middle finger to haters and abusive guys, and a loud self-confidence that, like Juju and Nura, strikes a chord with the spirit of the times.

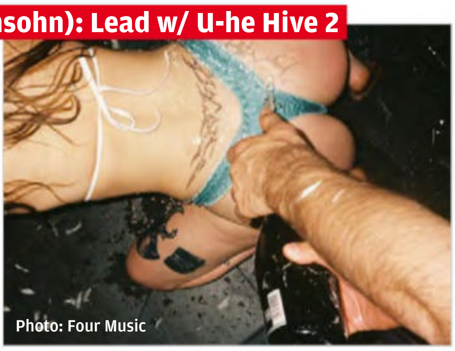
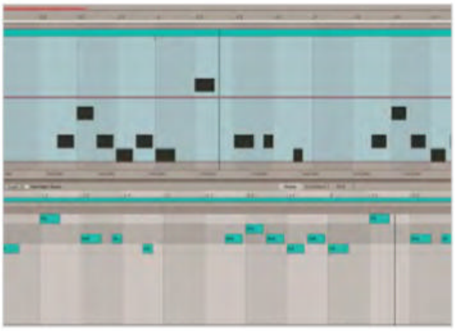


Photo: Four Music

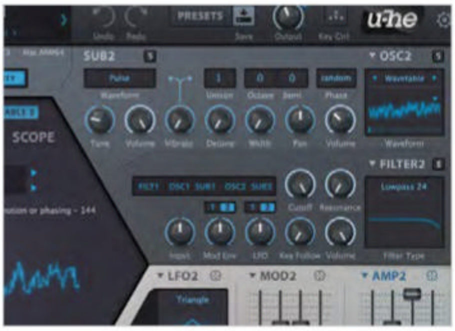
2 Robbensohn

Whether it‘s with Whitey En Vogue, Sechseuroneunzig, or Ikkimel, producer Robbensohn aka Robert Heiber, has achieved a great deal extremely quickly over the past five years. Musically, his work often draws on the electronic music of the Nineties, ranging from House to Happy Hardcore and Techno. And this mix is extremely popular in German Hip Hop.



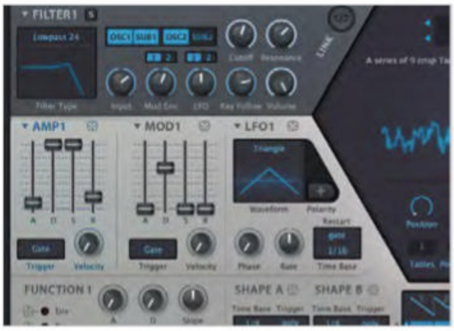
3 Three Notes

It doesn‘t take much for the melody of the Lead to be catchy. 156 beats per minute, the notes C, F, E-flat, and D-flat, and a very tight rhythm without any swing or funk. That fits the Techno vibe! Pay particular attention to the length of each note, that is, whether a note in the grid is an eighth note or a sixteenth note.



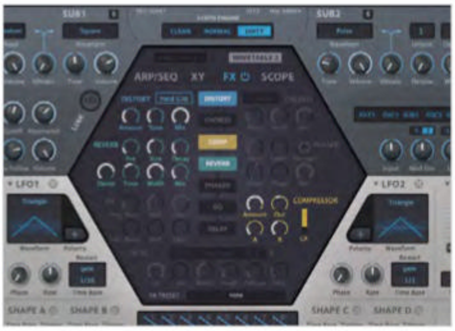
4 Hive Mind

With U-he‘s Hive 2, you can quickly achieve a dirty, scratchy Square Wave sound. To get started, set **Pulse** on OSC 1, **Square** on Sub 1 (Tune to 0, not -12), and the **Aggressors** Wavetable on OSC 2. Then, modulate the WT position of OSC 2 with an MOD1 envelope with a strength of 60. Set the volume of OSC 2 to 35 to give the sound a little edginess.



5 Dirty Filter

Switch to the Dirty Engine and then route **OSC1, SUB1, and OSC2** to Filter 1. Attenuate and thicken **Cutoff** (97), **Resonance** (65), **Input** (4 dB), and **Mod Env** (19). To do this, Key Follow (76) filters the high notes less. The **Amp Envelope** needs a short Release Time (19), while the **MOD1 Envelope** only needs a little **Decay** (64), which already has a nice bite to it!



6 Distort it, Compress it

The Distortion, Compressor, and Reverb effects from Hive 2 bring the lead sound over the finish line. If the Distortion becomes too loud and dominant, you can compensate for this with the Out Volume control on the Compressor. Add a small dose of Reverb (Mix at 24, Decay at 27, Size at 89) and you‘re ready to rock!

Disco Lines & Tinashe - No Broke Boys: Bass w/ Synapse Audio The LegendHZ

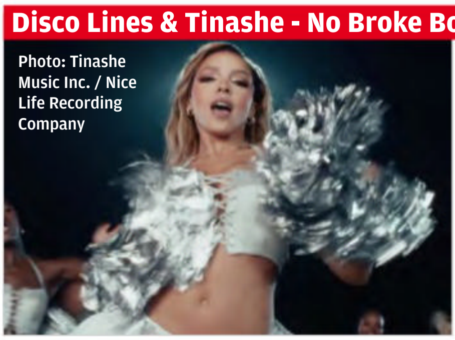


Photo: Tinashe Music Inc. / Nice Life Recording Company

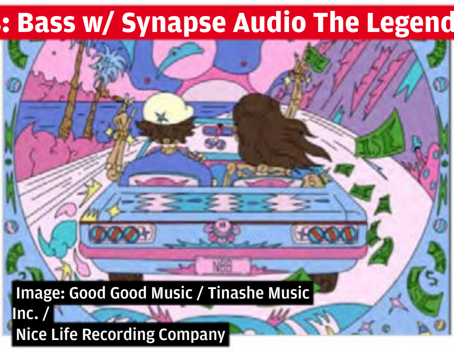
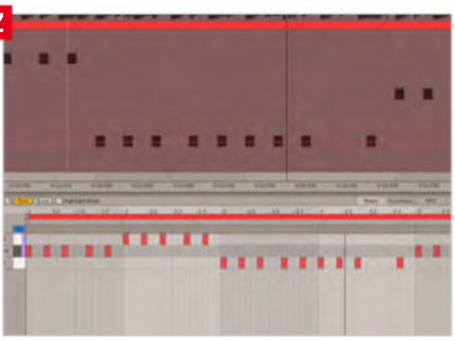


Image: Good Good Music / Tinashe Music Inc. / Nice Life Recording Company



1

Back in 2024

Tinashe, a singer and actress from Kentucky, USA, has been in show business for a long time. Born in 1993, she was in front of the camera at age 11. In 2014, at 21, she released her debut album. No Broke Boys was released in autumn 2024 as a precursor to her seventh album, Quantum Baby. The track is originally a smooth RnB number.

2

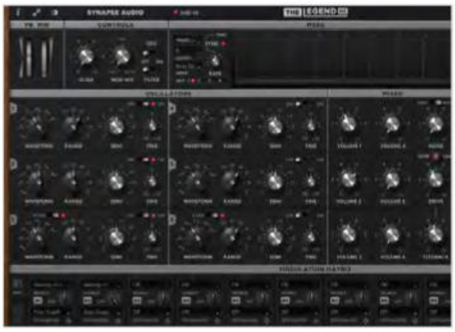
Disco Lines Remix

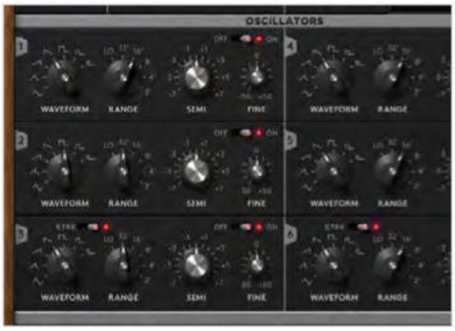
It's a paradox of the music industry. Songs are getting shorter and shorter, but more often than not, they don't become hits right away upon release. This was also the case with “No Broke Boys.” In the Spring of 2025, US producer Disco Lines teased a remix that went viral almost immediately. And less than two months later, this version entered the charts worldwide.

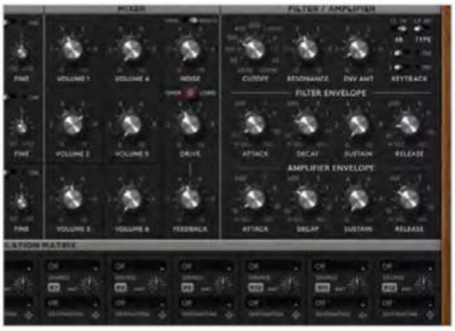
3

Basic Bass

131 beats per minute, displaced eighth notes (called syncopated) in E major with the notes G#, B, and E - all pretty standard ingredients. A small detail at the end of each round is the penultimate note, which Disco Lines simply omits in the bass line. You briefly fall into a bassless hole, wake up, and continue celebrating.


SYNAPSE AUDIO
THE LEGEND HZ
OSCILLATORS
MIXER
MODULATION MATRIX


OSCILLATORS
WAVEFORM
RANGE
SEMI
FINE
OFF
ON
KTRK


MIXER
FILTER / AMPLIFIER
CUTOFF
RESONANCE
ENV AMT
KEYTRACK
FILTER ENVELOPE
ATTACK
DECAY
SUSTAIN
RELEASE
AMPLIFIER ENVELOPE
NOISE
DRIVE
FEEDBACK

4

Mighty LegendHZ

Synapse Audio and Hans Zimmer have created an analog synth monster with The LegendHZ! The excellent Minimoog emulation, The Legend, from Synapse Audio served as the basis. For Zimmer, up to six oscillators, polyphony, a unison engine, arpeggiator, effects, and endless modulation were integrated. Perfect for bass sounds!

5

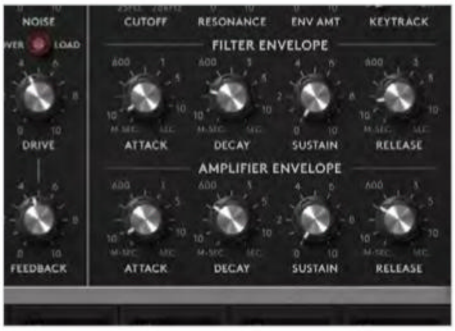
Triple OSC

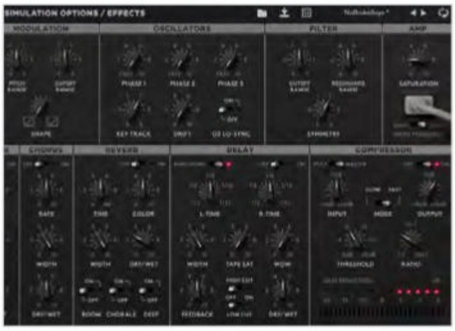
Set the polyphony to **MONO** in the upper right corner for monophonic operation, then a **Saw Wave** on Osc 1 (16“ at Range), a **Square Wave** on Osc 2 (one octave lower at 32” at Range), and another **Saw Wave** on Osc 3 (also one octave lower at 32“). This gives us the basis for a heavy, punchy bass beast.

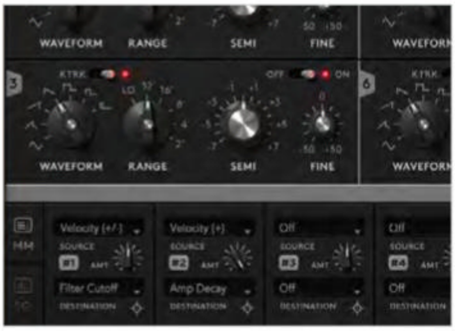
6

Amps and Filter

The volume ratios of the three oscillators are important: Osc 1 is considerably quieter (4.2) than Osc 2 (6.7) and Osc 3 (5). For the Filter, set the Cutoff to 185 hertz, Resonance to 4.55, and Env Amt (Envelope Amount or Modulation Strength of the Filter Envelope) to 1. As is often the case, the secret to the sound lies in the envelopes.


NOISE
CUTOFF
RESONANCE
ENV AMT
KEYTRACK
LOAD
FILTER ENVELOPE
DRIVE
ATTACK
DECAY
SUSTAIN
RELEASE
AMPLIFIER ENVELOPE
FEEDBACK
ATTACK
DECAY
SUSTAIN
RELEASE


SIMULATION OPTIONS / EFFECTS
MODULATION
OSCILLATORS
FILTER
AMP
CHORUS
REVERB
DELAY
COMPRESSOR


WAVEFORM
RANGE
SEMI
FINE
KTRK
OFF
ON
Velocity (+/-)
SOURCE
AMT
Filter Cutoff
DESTINATION
Velocity (+)
Amp Decay
Off

7

Envelope discussion

The interplay between Decay and Cutoff is most important for this sound. For the Amp Envelope, set **Attack** (7), **Decay** (325), **Sustain** (0), and **Release** (300) so that the sound doesn't fade out too long. For the Filter Envelope, set Attack to 7, Decay to 163, Sustain to 0, and Release to 43. The result should sound similar.

8

Comp-romis

The integrated compressor (the effects can be found on the “back” of LegendHZ via the circle icon in the upper right corner) compresses the bass once again so that it pushes and shoves even more with the appropriate volume compensation. Set the **Threshold** so that 4-5 dB of gain is reduced and adjust the output accordingly.

9

Analog Vibes

To make the sound even more analog (=uneven), I slightly varied the velocity values of all notes. Then **Velocity (+/-)** modulates The LegendHZ Cutoff (3) and Amp Decay (100), so that each note sounds slightly different. With the MIDI tool “Velocity” in Ableton, this variation in velocity works automatically.

Zampler Plug-in, Soundset, Audio Demo and MIDI Data: Download see page 9

Zampler & MPC Expansion: Polar Fox

The Sound of Tate McRae

Crowned the queen of Dark Pop by her fans, this singer occupies a unique place in the modern pop scene. The contrast between 808s, hard drums, and soft, emotional vocals gives her music an addictive quality. With the new Zampler expansion, Polar Fox, you can recreate this signature vibe yourself. Here's how. **by Ruben Mantel**

BEAT PLATINUM SELECTION
POLAR FOX
The 74 best patches from Virus TI, T2, Polar & Snow
ZAMPLER//RX
Beat
Win Mac
VST • AU
Beat
ZAMPLER//RX
FILTER
OUTPUT
MOD ENVELOPE
FILTER ENVELOPE
AMP ENVELOPE
002: BS DX7 Bright Bow
BEAT magazine // patch by Marco Scherer
SYNAPSE

Facts

Polar Fox for Zampler:

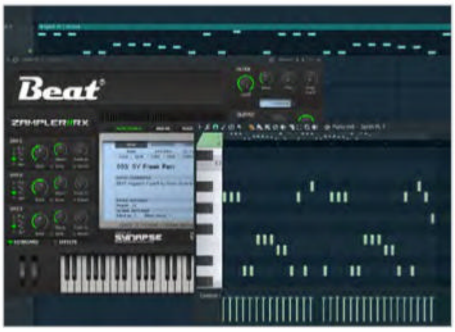
- 2.2 GB Soundbank
- 74 Patches
- 38 Leads, Plucks & Synths for finest Trance Anthems
- 20 powerful Basses
- 12 Pads & Textures for Soundtracks
- 4 FX
- 962 Samples

Polar Fox for Akai MPCs:

- 1.08 GB Soundbank
- 74 Patches
- 38 Leads, Plucks & Synths for finest Trance Anthems
- 20 powerful Basses
- 12 Pads & Textures for Soundtracks
- 4 FX
- 370 Samples
- Compatible Akai MPC One, X, Live, Live mkII, Force, Studio, Touch, Renaissance, Key 61, MPC Software 2 & MPC Beats

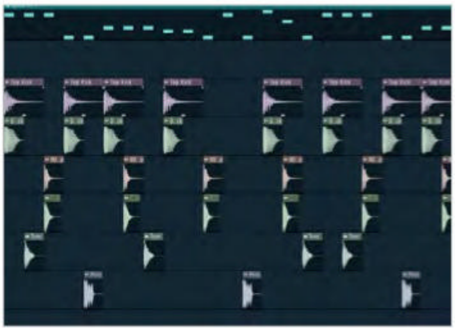
74 LEGENDS FROM THE VIRUS

The best can hardly get better – but we did it anyway! In the POLAR FOX Expansion, you'll find 74 of the very best patches of the legendary Virus TI Synthesizer, which we have given a final polish with careful analog post-processing. Thanks to tube compression and our Pultec EQs, as well as stereo widening, the sounds are even more powerful, warmer, and wider than the originals. From Leads to Pads to Basses – this brings the Virus more than authentically into your tracks! **www.zamplersounds.com**



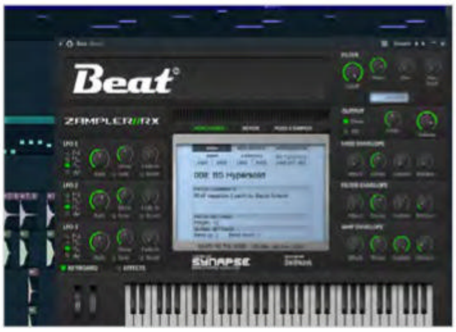
1 Main Loop

Start with a plucked sound from the expansion, such as **055: SY Freek Perc**. Then, develop the melodic foundation of your beat with it. The **note values** can be kept simple and **regular**, as the bounce will be created later by the drums. It's important that the melody feels **mystical** and dark, yet still moves **forward**.



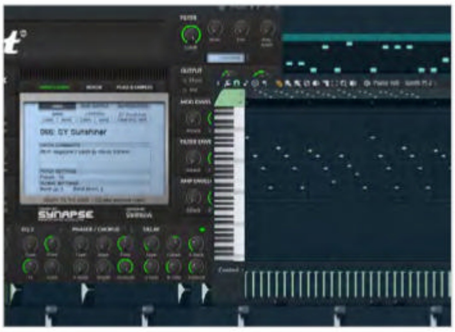
2 Make It Bounce

Grab strong drum samples with a modern **trap character**. **Claps on 2 and 4**, as well as punctual percussion on offbeats, are typical of Dark Pop and provide a driving groove. Feel free to layer different kicks or claps for more impact. If the beat induces head movements even without Hi-Hats, the rhythm is perfect.



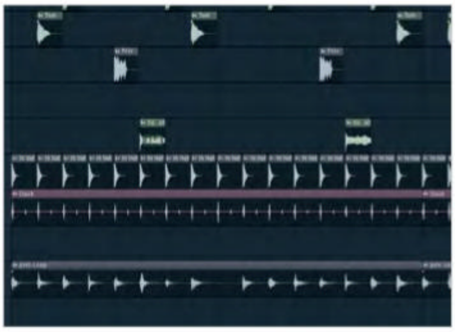
3 808-Bass

Now the song gets its deep foundation. Use the patch **008: BS Hypersolid** as an 808 bass. Play the notes **rhythmically** aligned with the Kick, but with enough **space** in between so that the low-end can breathe. Tonally, the notes should harmonize with the main melody's tones. Through octave jumps and slides, the bassline gets more exciting.



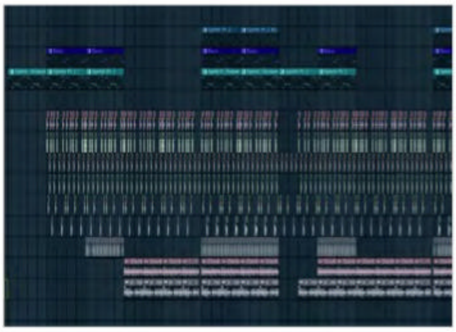
4 Top Synth Layer

In the chorus, the sound can become bigger. Use a second pluck or bell-like synth such as **066: SY Sunshiner**, to add chords or arpeggios. The trick here is to set the **reverb** and **delay** so that this layer floats slightly in the background. This gives your song depth and fullness without sounding overloaded.



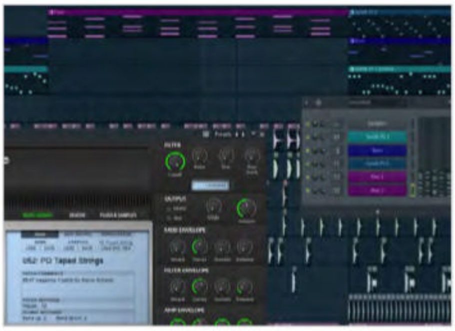
5 More Percussion

Dark Pop thrives on texture and small rhythmic accents. Add modern Trap-like **Hi-Hats** in **eighth** or **sixteenth rhythm** and add **unconventional** percussion sounds, like **tick noises** from **clocks, footsteps** or quiet **metal clinking**. These subtle details create atmosphere and give the beat a unique signature.



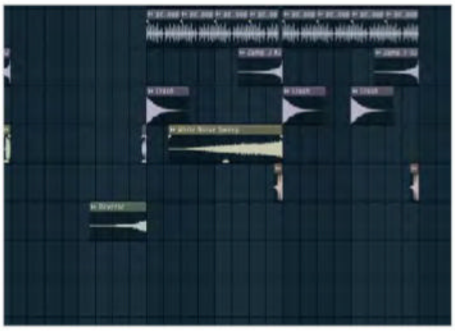
6 Arrangement

Now it's time for the song structure. Start with the main loop, reduce the elements for the verse, and increase the intensity toward the chorus. **Contrast** is key here. Something should change every **four bars**, such as a new **drum** or **synth element**, a filter, or even the removal of elements to create movement and keep tension.



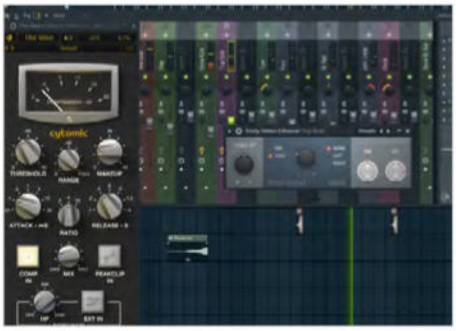
7 Pre-chorus Pads

In the pre-chorus, the song can blossom emotionally. Use warm, wide pads like **052: PD Taped Strings** or **047: PD Middlewarm Pad** and let them play **long, full chords** in line with the vocal melody. They create the typical **"lift"** before the chorus. **Reduce** the **drums** to the minimum here to allow more space for melody and mood.



8 Effects and Fills

To keep the song cohesive, it needs transitions. The best glue has proven to be short **Drum Fills, Risers, Downlifters** and **Crashes**, as well as **automation** of **filters**. Also, create your own glue, for instance by recording the **reverb tail** of an instrument, then **reversing** it afterwards so it can smoothly introduce a new instrument.



9 Mix Forward

For mixing, the rule of three D's applies: **Direct, powerful, dynamic**. Use **compression** only **sparingly** or **in parallel**, to maintain punch. **Sidechain** the **Bass** to the **Kick**, spread the **Percussion** across the **stereo field** and keep **Vocals** and **Main Synth** central. This way, every sound gets its place and your Dark Pop beat sounds professional, clear, and modern.

[1] www.xlnaudio.com; [2] www.synapse-audio.com; [3] www.nativeinstruments.com; [4] www.eventide.com; [5] www.valhalladsp.com

Test: Korg handytraxx Play

When you say “Portablism,” you inevitably think of the Vestax Handytrax—the small, battery-powered turntable that suddenly became ubiquitous in the early 2000s. A USB version followed before the company went bankrupt at the end of 2014. **by Jan Wilking**

Features

Portable turntable

Drive: belt, digital rotation correction

33.3 / 45 / 78 RPM

Looper: 44.1 kHz/16-bit, ~20 s max.

Effects: Filter (3 types), Delay (10-1000 ms)

Conversion/Mix: 44.1 kHz, 32-bit float

Preamp: RIAA

Power supply or 6×AA

Weight: 2.3 kg

Facts

Manufacturer: Korg
Web: korg.com
Distribution: Korg & More
Price: 429 Euro

▲ Portable & robust
▲ Slip sheet, power adapter, accessories included.
▲ Versatile connections
▲ RIAA preamp
▲ Creative effects & looper
▲ Long battery life
▲ Also for left-handed users.
▼ Fader not at professional level.
▼ No ultra pitch function.

Sound: ■■■■■□
Features: ■■■■■◧
Price/Perf: ■■■■■□

Overall: ■■■■■□

Alternatives

Reloop Spin
245 Euro
reloop.com

Stanton STX
395 Euro
stantondj.com

Numark PT-01
139 Euro
numark.com

Thanks to the carrying handle, cover and battery compartment, the turntable is easy to transport.

Korg is where Korg comes in: The handytraxx play was developed in collaboration with Toshihide “Toshi” Nakama (former Vestax president and co-developer of Handytrax), who passed away on June 10, 2023. Korg is continuing his idea and explicitly sees the handytraxx play as a reinterpretation of the original—including modern digital functions.

Portable design

The handytraxx play remains faithful to the portable case form factor (including dust cover and carrying handle), but looks more sophisticated than many portable devices of recent years. At its heart are a belt-driven platter with digital rotation correction and a specially developed, smooth-running crossfader. The control panel can be rotated for right- or left-handed users (battle orientation), and the headshell can accommodate either ceramic or MM cartridges.

All the connections you need for mobile use, as well as for easy use in the rehearsal room or desktop studio, are included: AUX-In, Line-Out, Phono-Out (RIAA preamp integrated), headphones, and an internal 2.5 W speaker for spontaneous sessions. Power can be supplied either by the power supply unit or six AA batteries. Korg advertises approximately 11 hours of battery life (at medium volume with speaker on), which was confirmed in our test when using high-performance batteries. Weighing 2.3 kg and measuring 370 × 280 × 84 mm, handytraxx play is also suitable for carrying in a backpack.

Effects, looper & scratching

The real-time effects are particularly interesting for creative musical use. Here you‘ll find three Filters (DJ filter as HP/LP blend, EQ/Isolator with bass boost, Peaking Wah with modulation) and a musically adjustable Delay (via vertical level fader). In addition, there is an integrated Looper (stereo, approximately 20 s), which functions like a sample pad and proves to be a creative hub in practice: Capture a beat, create an exciting crescendo with Filter and Delay, and then, with a little practice, jump back in at the right moment in the song. You can even change the record or scratch over the looped part! The AUX Preview/Cue options plus Looper give the small deck an almost “mixer-like” behavior that is rarely found in this class. It‘s just a shame that the AUX input cannot be looped through the effects.

However, the handytraxx is not the first choice for aggressive scratching, as the tone arm and crossfader (which is designed as a switch and only engages properly after a few millimeters) are not solid enough for this purpose. Otherwise, the fader provides a precise, “buttery smooth” feel with minimal dead zones, and the reverse option also allows for quick trick cuts. The belt drive with digital stabilization quickly compensates for small tempo fluctuations, which is important for timing when cutting.

Sound and alternatives

Thanks to the supplied ceramic cartridge, handytraxx play is ready for use right away and provides a solid, traction-safe signal – more robust than audiophile, just as expected in portablism. The internal preamp operates with low noise levels, suitable for mobile sessions, and the line-out delivers in practical terms. The 2.5-watt speaker sounds clear and loud enough for jamming in your living room or at the park, but doesn‘t replace a PA due to its lack of sufficient bass.

In recent years, the portable sector has been dominated by Reloop SPiN, Numark PT01 Scratch, and Stanton STX. SPiN and STX score points with their Bluetooth audio and USB recording capability, while STX also features Ultra-Pitch for more extreme pitch changes and a factory-installed Mini-Innofader. Korg counters with the best Effects/Looper package and significantly more mature signal routing (line and phono), but does without Bluetooth and Ultra-Pitch.

Verdict

With the handytraxx play, Korg convincingly brings the DNA of the Vestax Handytrax into the year 2025—not as a nostalgic gadget, but as a serious portable instrument. The combination of sturdy mechanics, a useful fader, creative Filters, musical Delay, and a practical Looper simply gets more out of a record on the go than the competition currently offers. Those who primarily need Bluetooth/recording or ultra-pitch should stick with SPiN/STX. Everyone else will find the most modern Handy Trax interpretation with a truly unique selling point. At 429 Euro, the price is slightly above entry-level portable devices, but below “large” DJ decks, and is still reasonable considering the features and workmanship. ⁘

handytraxx play
PORTABLE RECORD PLAYER

More Info

Test: NI Kontrol S-Series FW 2.0

Even though it looked as if NI had written off the Kontrol keyboard, some important functions were added bit by bit. And with the first major update to 2.0, Native Instruments delivers universal DAW integration that no other controller keyboard offers to this extent. **by Jan Wilking**

Plug-in parameters and mixer are clearly displayed on the large color display.

The first major update introduced storable MIDI templates that could be configured directly on the device as desired. Each control element can be named appropriately, as can the template itself. Keyboard splits can also be adjusted and are color-coded thanks to LightGuide. Another update made PlayAssist with scale functions, including pre-built chord sets and a flexible arpeggiator, available directly without having to go through the Komplete software.

The LightGuide (multicolor LEDs above the keys) is a great help here, as it displays the notes belonging to the key or played by the arpeggiator in color. And with keyboard splits, you can choose to have only the keys in a specific zone trigger the arpeggiator. In addition, both MIDI outputs (via USB-C and DIN) can be used in parallel, which can be configured via template or key zone.

Rudimentary Maschine control

The integration into the internal Maschine software, which many users sorely missed and which had been completely omitted from the upgrade from mk2 to mk3, has returned. However, it is only available in a very rudimentary form, limited to the operation of instruments and FX via the controls and transport controls. Essential functions such as browser and mixer control are missing, however, and the keyboard only recognizes the standalone version of the Maschine software and not the plug-in in the DAW. We can only hope for further updates.

Colored DAW integration

DAW control was limited to transport control and a mixer display, where the volume and panning of the 8 selected channels could be controlled via knobs and muted or soloed via buttons. After updating to 2.0, the large display shows not only the names of the tracks but also the colors selected in your DAW for the respective tracks. This also includes the virtual VU meters, which display the volume of the tracks in real time, and makes it much easier to keep track of everything when consistent color coding is used in your DAW.

You can now control the parameters of sound generators and effects in your DAW directly using the high-quality encoders on the Kontrol keyboard. This works seamlessly even when switching between presets or different plug-ins, as control is bidirectional and the keyboard can read the current value in your DAW. The parameter names and values are clearly shown on the large display, as is the name of the instrument/effect. Since this works without having to go through the Komplete software, you can also control plug-ins without NKS support and even your DAW's internal effects and instruments.

The controller makes no distinction between deeply integrated NI plug-ins, such as Komplete Kontrol or Kontakt 8, and third-party plug-ins. Kontakt or Komplete as sound generators on one track, followed by an Eventide reverb effect and the internal stock delay from your DAW – no problem, just use the buttons above the display to switch between the individual plug-ins on a track.

Verdict

The revised mk3 series of controller keyboards offers one of the best synthesizer keyboards currently available on the market, including polyphonic aftertouch. Overall, the feel and appearance of the keyboard exude a high level of quality, which, unlike many competing products, gives it the feel of a real instrument. This is further enhanced by deep integration with Komplete and Kontakt software, including LightGuide support and the extended NKS2 standard.

With the new 2.0 firmware, the keyboard has now joined the elite group in terms of universal control of MIDI hardware and DAWs outside the NI universe. Detailed MIDI templates that can be configured directly on the device, flexible PlayAssists, and, above all, the excellently implemented DAW integration make the Kontrol S series, in my opinion, the best master keyboard currently on the market. ⁘

BIG UPDATE FOR ABLETON CONTROL!
Live

More Info

Features

- Keyboard controller
- USB/MIDI
- Fatar keybd w/ 49/61 keys
- Polyphonic aftertouch
- Light guide
- Color display
- High resolution (1280 × 480 pixels)
- 8 encoders and 4D controller
- Incl. Komplete Kontrol software
- Integrates w/Live, Bitwig, Cubase, Logic

Facts

Manufacturer: Native Instruments
Web: native-instruments.com
Distribution: Retailer
Price: 529 Euro (49 keys); 699 Euro (61 keys)

- ▲ Very good keyboard
- ▲ Polyphonic aftertouch
- ▲ Large display
- ▲ Lightguide
- ▲ DAW integration
- ▲ PlayAssist
- ▲ Flexible MIDI templates
- ▲ Disability accessible
- ▼ Maschine control needs improvement

Build: ■■■■■◧
Operation: ■■■■■◧
Price/Perf: ■■■■■□

Overall: ■■■■■◧

Alternatives

Novation SL MKIII
from 499 Euro
novationmusic.com

Arturia Keylab mk3
from 420 Euro
arturia.com

Nektar Impact LX mk3
from 179 Euro
nektartech.com

Test: Sonicware Liven Evoke

The Sonicware Liven Evoke is a versatile synthesizer specialized in ambient and experimental sound design, aiming to stand out from other synths and grooveboxes with its special mix of acoustic instrument sounds, granular effect synthesis, and cinematic reverb spaces. We took a closer look at Evoke, from sound architecture to performance to workflow and creative potential. by Jan Wilking

Features

- Digital groovebox
- Ambient synthesizer
- Acoustic-inspired synthesis
- Musical granular effect
- 10 reverb types
- 16 chord modes
- 4-track sequencer
- Speakers and battery operation

Facts

Manufacturer: Sonicware
Web: sonicware.jp
Distribution: Retailer
Price: 279 Euro

▲ Exceptional sound synthesis
▲ Optimized for ambient and soundtracks
▲ Musical granular effect
▲ Suitable for beginners
▲ Mobile with battery/ speaker
▲ Also for external audio
▲ 4-track sequencer
▲ Chord-pad styles
▼ No USB
▼ Labeling hard to read

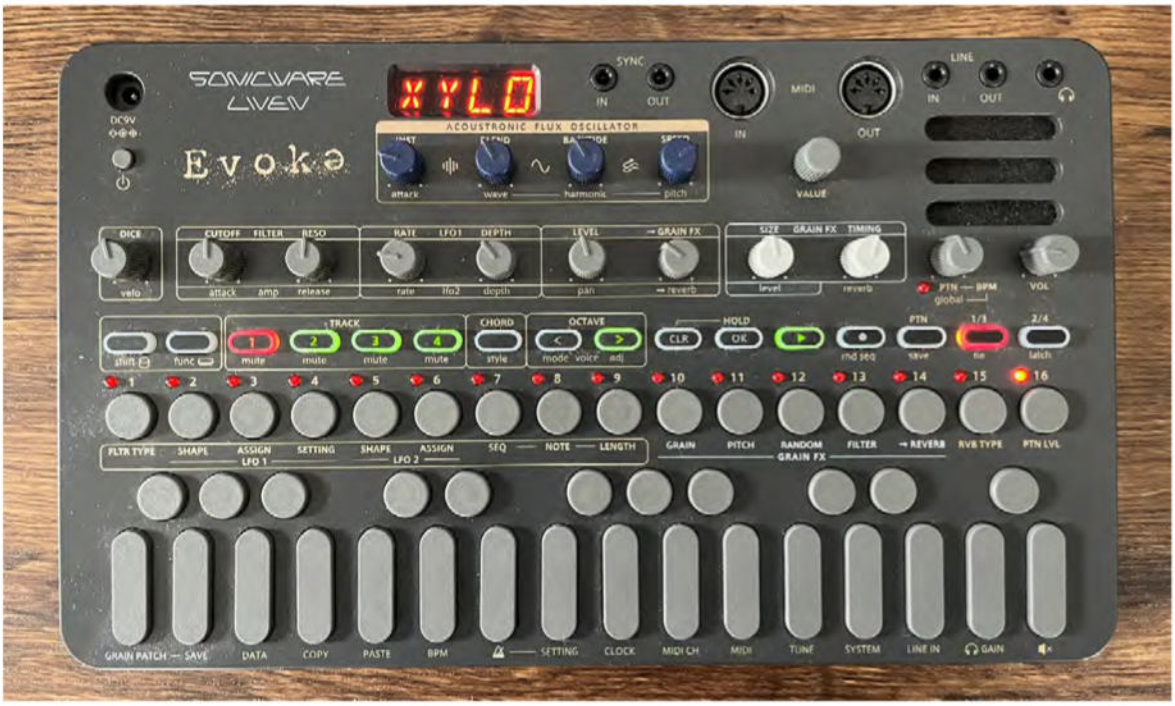
Processing:	■■■■◧□
Sound:	■■■■■□
Price/perf:	■■■■■◧
Rating:	■■■■■□

Alternatives

Novation Circuit Tracks
315 Euro
novationmusic.com

nanobox lemondrop
439 Euro
1010music.com

Polyend Synth
479 Euro
polyend.com



Anyone familiar with Sonicware products might be surprised. There is already a very similar-looking groovebox for this genre, aptly named: Liven Ambient. In fact, there are some overlaps, the main differences lie in sound generation. Ambient offers wavetable synthesis with various algorithms and thus a somewhat more conventional sound generation. Evoke, on the other hand, works with lo-fi samples and granular synthesis and is therefore more experimentally designed, optimized for large surfaces and soundscapes as well as slowly evolving drones and sequences.

Acoustronic Flux Oszillator

At the heart of the Liven Evoke is the new Acoustronic Flux Oszillator. This innovative engine combines acoustic multisamples (e.g., piano, harp, violin, strings, brass, and ethnic instruments) with digital waveforms to create an unusual blend of organic and synthetic sound. The 34 acoustic instruments are broken down into up to 256 fragments, played backwards with backtide modulations and smoothly cross-faded. Additionally, there are 20 digital waves and two filtered noise types with their own harmonic tables.

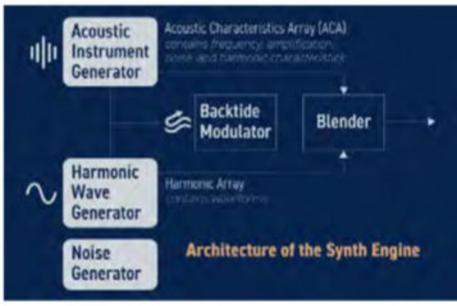
Granular effects

The Grain FX section is also an important part of the Evoke sound. Up to 12 grains per track break the audio material into the smallest components, whose size, direction, feedback, shape, spray, diffusion, and jitter are individually modulatable. Thanks to pitch scales (octaves, fifths, chromatic, and scale-based arrangements), the whole thing can also be quantized precisely and tonally appropriately.

A special feature: The Grain FX not only process internal sounds but also external stereo sources (line input) - other sound sources and even the environment (field recordings) can be fed into the own sound world, which is especially exciting for mobile outdoor performances!

Reverb for spatial sound

Since it's suitable for spherical and cinematic music styles, there are ten different reverb types, including the shimmering Mirage. This turns sounds into expansive, deeply layered sound spaces. The reverb effects are not just an addition here but


Acoustic Instrument Generator
Acoustic Characteristics Array (ACA)
Backtide Modulator
Blender
Harmonic Wave Generator
Harmonic Array
Noise Generator
Architecture of the Synth Engine

The unusual sound generation sets Evoke apart from its sibling Liven Ambient and other grooveboxes.

an important part of the overall sound and sound really good. They are usable per track and offer flexible effect routings for multi-layered textures. Combined with modulated Grain FX, soundscapes full of depth, size, movement, and atmosphere emerge, which one would not expect from the small plastic box at first glance. The results achievable without huge effort range from delicate ambient to opulent film music carpets to experimental post-classical compositions.

Sequencer and performance

The 4-track sequencer allows both real-time recording and step-by-step input of patterns with up to 64 steps, storable in 128 pattern slots. Each track has its own sound engine, granular and reverb FX, as well as two LFOs, envelope, and filter (LPF, HPF, BPF). The sequencer shines with features such as parameter locks, pattern repeat, probabilities for notes between 25–100 percent, random playback orders, pattern chains, and chord modes (16 chord types assigned to one key).

This not only makes studio work efficient but also offers live performance functions for spontaneous sound progressions, rhythmic variations, and dynamic arrangements.

Operation and workflow

The workflow is typical Liven. Those familiar with other devices in the series will quickly get into the groove here. The interface is compact, self-explanatory, and mobile with 27 buttons, illuminated pads, and step buttons. The workflow focuses on intuitive operation, short paths to effects and sound modulation, and flexible integration via MIDI and sync.

The negative points are mainly the nested menu structure for deeper editing and the sometimes cryptic assignment of the controls. Many functions rely on secondary or tertiary buttons, which requires a bit of getting used to. Moreover, the panel is not very high contrast and therefore difficult to read, especially in low light.

Mobility and integration

Mobility is the core of the concept: With an integrated speaker and battery operation for up to 10 hours, the Liven Evoke is suitable for sessions anywhere. However, the power supply lacks an adapter in the package – instead, 6 AA batteries or a separately available adapter are required.

Connections for MIDI (in/out), line-in, and line-out are available. However, a USB port is missing, which complicates integration and sample import/export in the studio a bit. For the mobile jam session and creative workflow, though, the connections are sufficient.

Sound design in practice

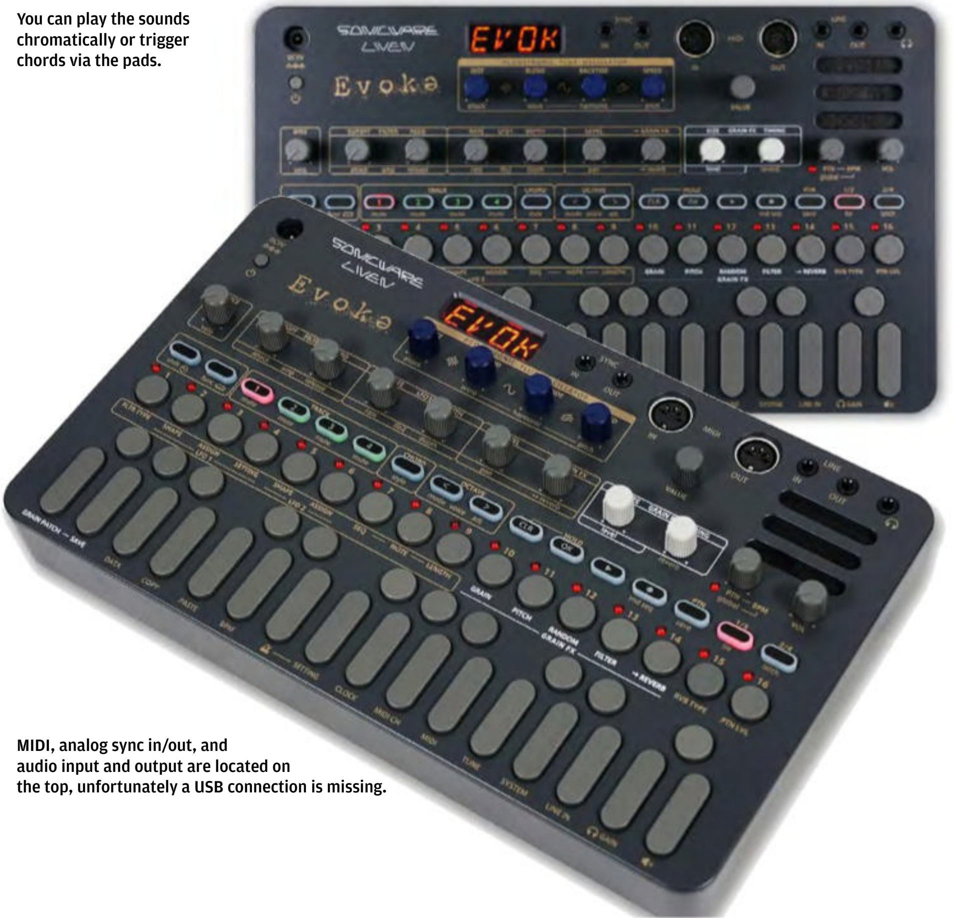
The Liven Evoke opens up fascinating possibilities for sound designers and ambient composers. The mix of acoustically inspired sounds, granular decomposition, and flexible modulation makes it particularly interesting for

- atmospheric music and film music
- experimental electronics
- post-classical instrumental music
- soundtracks, sound collages, and installations

It is also suitable as a mobile recording device for spontaneous ideas or as an effect processor for external hardware. The lo-fi basic samples are less suited for striking EDM basses or poppy lead sounds, here the focus is clearly on pads, movements, and depth staging.

Playful rather than overly intellectual

It is positive to highlight that, due to its rather untypical sound generation structure, interesting results can be achieved even without basic synthesizer knowledge. This also allows professionals a not overly intellectual but rather playful and intuitive approach that nonetheless ensures convincing results. Liven Evoke is therefore of interest to beginners as well as experienced musicians looking for new inspirations outside of classic synthesizer structures.



You can play the sounds chromatically or trigger chords via the pads.

MIDI, analog sync in/out, and audio input and output are located on the top, unfortunately a USB connection is missing.

More info

VERDICT

Sonicware sets new standards for portable ambient creative workstations with the Liven Evoke. Innovative synthesis, granular FX, and cinematic reverbs make the Liven Evoke an inspiring instrument at an affordable price. The synthesizer is a dream machine for sound explorers, sound designers, film musicians, and experimental artists who want to create detailed textures, explore sound atmospheres, and tell musical stories. If you're looking for brute EDM leads and basses, fast pop songs, or classic keyboard performance, you'll appreciate the LoFi samples and focus on ambient sounds less, but even in these genres, Liven Evoke can be mixed in for those signature sounds.

The mobility, sound variety, and great creative potential are the big plus points, while we note the missing USB features, the partially nested operation, and the power supply not included as forgivable minuses. ::

Test: Oberheim TEO-5 Desktop

Following the Take-5, the TEO-5 is now also available in a compact desktop case, and you couldn‘t get a genuine Oberheim synthesizer any cheaper than this! But the TEO-5 Desktop is anything but a stripped-down version; apart from the keyboard, you only have to do without a few controls compared to the TEO-5 Keyboard. **by Jan Wilking**

Features

- Polyphonic synthesizer
- Desktop housing
- 5 analog voices
- 2 VCOs
- X-Mod/Through-Zero FM
- SEM multimode filter
- Dual digital effect
- 256 Factory/User Presets each
- Dimensions: 533 x 178 x 89 mm
- Weight: 3.08 kg

Facts

Manufacturer: Oberheim
Web: oberheim.com
Distributor: ADAM Audio
Price: 1,279 Euro

- ▲ Modern analog sound
- ▲ VCOs with Through-Zero FM
- ▲ SEM multimode filter
- ▲ Flexible modulation matrix
- ▲ Compact design
- ▲ Modulatable effects
- ▲ Flexible sound
- ▲ Voice spread for stereo and more

Operation: ■■■■■◧
Sound: ■■■■■◧
Price/Perf: ■■■■■□

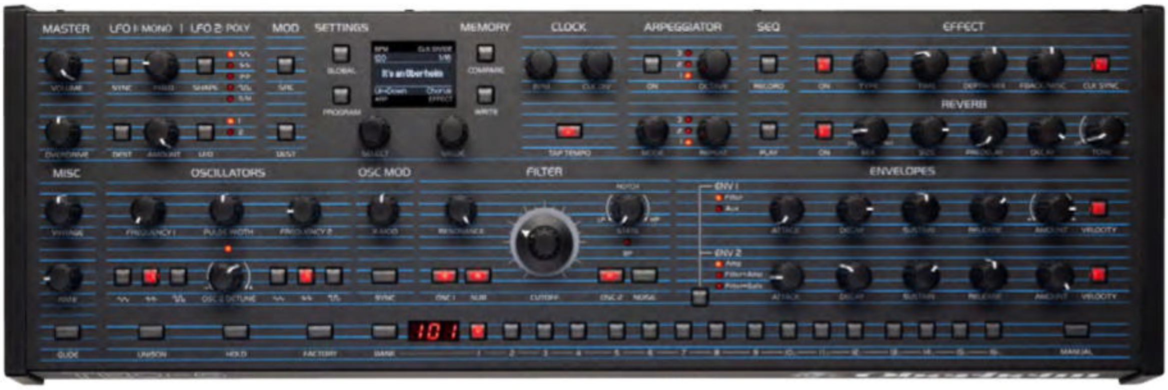
Total: ■■■■■◧

Alternatives

Sequential Take5/OB-6
1275 Euro
sequential.com

Behringer UB-Xa Desktop
659 Euro
behringer.com

Novation Peak
1599 Euro
novationmusic.com



In addition to classic Oberheim elements such as the characteristic SEM multimode filter, the Desktop Module offers several special features such as Through-Zero FM, a polyphonic sequencer, and analog overdrive. While analog oscillators and filters provide vintage sounds, the extensive modulation matrix, in combination with two digital effects and a polyphonic step sequencer, also enables complex and modern sounds.

I tested how the TEO-5 Desktop performs in general and also in direct comparison to the Sequential Take-5, OB-6, and Behringer UB-Xa.

Differences from the keyboard version

Shortly after the release of the TEO-5 keyboard, many people expressed a desire for a desktop version. Although the semi-weighted Fatar keyboard of the TEO-5 keyboard is extremely playable, with excellent velocity sensitivity and aftertouch, the problem for many was that the TEO-5 keyboard only has 44 keys due to its compact dimensions. There is a practical split function that allows you to transpose the lower half of the keyboard down by one or two octaves so that you can play low bass notes while the upper keys remain available for leads in higher registers. Nevertheless, many keyboardists found the 3.5 octaves too limited for a polyphonic synthesizer and wanted either a version with 61 or more keys or a space-saving desktop version so they could play the synthesizer with an existing master keyboard. The latter is particularly interesting if this master keyboard sends polyphonic aftertouch, such as the NI Kontrol 61 mk3 used in our test. This is because TEO-5 can process Poly-AT, allowing for more expressive playing than with the standard mono aftertouch, which can only affect all voices simultaneously.

Modern design

With the TEO-5 Desktop, it‘s not just the keyboard that has been omitted, but the entire control panel has been slightly compressed. This makes the TEO-5 module about the same size as classic 19-inch rack devices, but unfortunately a tad too wide for rack installation. You don‘t have to make any major compromises for the more compact format, though. Only the separate controls for the two LFOs on the keyboard have been reduced to a single set of controls. A switch allows you to determine which of the two LFOs you want to control with the speed and amount controls. Direct selection of the LFO waveforms, with 5 buttons each, has been replaced by a single button for stepping through and 5 LEDs.

Many parameters are directly accessible

In practical use, this reduction is acceptable, especially since all other controls and buttons remain unchanged. This means that there are still 40 controls and plenty of illuminated buttons for direct access to the sound generation. The easy-to-grip plastic potentiometers offer a pleasingly strong turning resistance. Unfortunately, the parameter is still not automatically shown on the display when a control is turned, something we already criticized in the TEO-5 keyboard.

Access to deeper functions is available through a well-readable OLED display with corresponding endless knobs.

Two LFO (mono/poly)

The user interface is clearly structured and follows the typical layout of classic analog synthesizers. On the left is the Modulation Section with two identically constructed LFOs. The LFOs offer standard waveforms including Sample & Hold for random value changes, can be synchronized to tempo, and can modulate various parameters. The assignment is intuitive: Press the Destination button, select the target parameter by turning the knob (such as the conveniently large Cutoff Knob), and select the modulation strength with the Amount knob. LFO1 is global, meaning it affects all voices simultaneously, making it useful for synchronous tremolo, vibrato, or modulation of effect parameters. LFO2, on the other hand, modulates each of the 5 voices individually, which can provide more complex modulations for polyphonic playing.

WRITE
CLK DIV
SELECT
OSC MOD
VALUE
TAP TEMPO
FILTER
RESONANCE
NOTCH
LP
HP
STATE
BP
OSC1
SUB
CUTOFF
OSC 2
NOISE

The legendary State-Variable Filter provides the characteristic Oberheim sound

Vintage knob, Unison

The Vintage Control provides subtle to clearly audible variations in Pitch, Filter Frequency, and so on, resulting in a more lively sound that is often perceived as "organic" and "analog."

The 5 voices can be layered to create a rich, unison sound. Or you can use Chord Memory to store any chord and then play and transpose it using just one key on the keyboard.

Many modulation possibilities

A Modulation Matrix with 19 slots allows for further assignments, currently offering a choice of 19 modulation sources (including oscillators!) and a generous 64 modulation destinations (including Cutoff for Filter FM). For a polyphonic, essentially analog synthesizer, the modulation possibilities are exceptionally extensive. An interesting feature is Voicespread as a modulation source, which allows the sound to change with each voice played. A simple application would be to link it to panning in order to distribute the individual voices across the stereo panorama, thus creating the very wide sounds typical of Oberheim (which I would have liked to have had direct access to via a control on the interface). However, you can also use it to modulate the continuously adjustable waveform of the oscillator, so that each voice sounds subtly or drastically different. In combination with cross-modulation, experimental sequences in the style of a modular system are also possible.

The assignment of the matrix slots is also intuitive: The source and destination can be selected directly by pressing the Source or Destination buttons and turning the desired control (for example, LFO1 Frequency and Cutoff). You can set the intensity of the modulation using the Value control below the display.

2 analog oscillators (VCO)

Two voltage-controlled analog oscillators (VCOs) serve as sound generators. The two VCOs offer Triangle, Sawtooth, and Square waveforms (with variable Pulse Width). Continuous crossfading, like with the Take 5, is not possible, but the three waveforms can be combined in any way you like.

In addition to the two VCOs, there is a Suboscillator (Square Wave) coupled to VCO1 and a Noise Generator with white or pink noise. In combination with the crisp envelopes, percussive sounds are also no problem.

Oscillator modulation

A first highlight of TEO-5 is OSC MOD. Here, VCO1 can be hard synchronized to VCO2, which ensures convincing cutting Leads and Basses. Even more exciting is X-MOD for continuously adjusting the modulation of VCO1 by VCO2. This results in the familiar metallic sounds, from skewed Drones to punchy Basses, to Electric Pianos, and bell-like tones. Analog oscillators sound very different from digital synthesizers.

Through-Zero FM

TEO-5 offers Through-Zero FM as a special feature. With classic X-Mod/FM, such as in the Oberheim OB-X8 and Take 5, the sounds produced are often out of tune and, therefore, not so easy to play tonally. Through-Zero FM, on the other hand, ensures correct tuning, so that the sounds produced can be used to play melodies that fit tonally with the rest of the song - without any further effort or retuning of the oscillators. Combining this feature with the wide frequency range and mixable waveforms of the two VCOs and the option to filter only one VCO, results in a variety of different sounds with plenty of charm and character.

Classic Oberheim filter

Another highlight and, in terms of sound, the most noticeable difference between Through-Zero FM and the Take 5 is the filter. It is a 12dB two-pole filter that can be continuously blended between Lowpass, Notch, and Highpass and can also be used as a Bandpass Filter. It is obviously based on the design of the legendary Oberheim SEM, while the Take 5's 24dB four-pole filter is based on the Prophet-5's Lowpass Filter. Unlike the Take 5, the TEO-5's filter cannot be set to self-oscillate at high resonance. However, in our ears, it fits much better with the VCOs in terms of sound. While the Take 5 always sounds a tad overdriven and harsh, which is probably due to the filter's rather hot start-up and its response to it, this is better compensated for by the creamy Oberheim filter.

EQ
EFFECT
ON
TYPE
TIME
DEPTH/MIX
FBACK/MISC
CLK SYNC
REVERB
ON
MIX
SIZE
PREDELAY
DECAY
TONE
ENVELOPES
DECAY
SUSTAIN
RELEASE
AMOUNT

The built-in effects also offer digital reproductions of legendary Oberheim effects from the 70s.

The different filter types also make TEO-5 more sonically flexible. And despite the lower slope, we managed to create snappy filter basses and percussion in conjunction with the fast envelopes. Unfortunately, keyboard tracking can only be set using the menu.

2 fast envelopes

Two ADSR envelopes are available for modulating any parameter. Envelope 1 is directly connected to the Filter Frequency, but can also be used as an AUX Envelope to modulate the Pitch, for example. Envelope 2, on the other hand, is primarily intended for the Volume, but can also modulate the Filter, leaving Envelope 1 free for other purposes. The assignment can be changed directly via the interface using buttons.

The envelopes are very flexible, capable of everything from crisp percussive zaps to slowly developing pads and drones. An interesting feature is the Delay function, which can be set via the menu and delays the onset of the envelope, allowing for even more variety in the sound progression.

Dual effect

TEO-5 also has two built-in effects that, despite being digitally generated, interact very harmoniously with the sound generation and exude analog flair. In addition to a great-sounding Plate Reverb effect with direct access to Decay, Attenuation, Tone, and First Reflection, the Multi-Effect is particularly interesting. BBD and Tape Delay add movement to arpeggios and leads. Chorus, Flanger, and Rota-

LFO 1: MONO | LFO 2: POLY
MOD
SYNC
FREQ
SHAPE
S/H
SRC
OVERDRIVE
DEST
AMOUNT
LFO
OSCILLATORS
MISC

LFO 1 and 2 share the controls, otherwise there are no differences from the keyboard

Due to its compact format, the module also fits perfectly into the desktop studio

ry broaden pads and organs. Distortion and Lo-Fi (Tape Emulation) add more grit to the sound, which is a welcome addition to the generally transparent, clean, and hi-fi sound. In addition, there are two algorithms based on Oberheim's vintage effects such as Phasor and Maestro: Phaser and Ring Modulator.

Modulate effect parameters

Since the effect parameters are available as targets in the Modulation Matrix, extensive modulations are possible. This is interesting, for example, with the Highpass Filter, which can also be selected as an effect and whose frequency can be modulated in this way, for example, via Velocity, Envelope, and/or LFO. This allows you to combine the SEM Lowpass with a downstream Highpass Filter.

In addition, there is an adjustable stereo Overdrive for the Master Output, whose control is located directly below the Volume control at the top left.

Rudimentary sequencer

Compared to the well-equipped sound generation, the Sequencer Section is, unfortunately, very rudimentary. There is a polyphonic sequencer with up to 64 steps, but it only has two buttons: Record and Play. Record starts step input, whereby chords, rests, and tied notes can also be entered. It is not possible to record sequences in real time or edit them afterwards. We would have liked to see more here. After all, the 16 illuminated buttons in the lower section would be perfect for use as a running light and for switching steps on and off. But as with the Take 5, these buttons are only used to switch between presets. Unfortunately, it's also not possible to record control movements. The Arpeggiator offers nothing out of the ordinary, but at least, like the sequencer, it sends the notes out via MIDI so they can be recorded in the DAW.

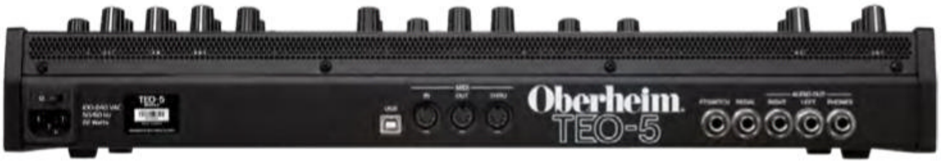
MIDI/USB

On the back, in addition to USB MIDI, there is also the classic MIDI trio in DIN format. There is also a stereo output (unfortunately only unbalanced), a headphone output, and connections for a footswitch (such as for holding a key or arpeggios or for sustain) and a foot pedal (for example, to control the Filter Frequency when playing with both hands). The built-in power supply is a welcome feature.

Alternatives

TEO5 is currently the most affordable Oberheim synthesizer, but it does have some competition. I have already discussed the differences between it and the Take5, which is largely identical in design, in my review. And then there is the Sequential OB-6, which Tom Oberheim helped develop. Not least of all because of its Multimode Filter, the OB-6 has a sound comparable to that of Oberheim, coupled with some nice features from the Prophet-5, such as the Polymod section. TEO-5 offers a more extensive Modulation Matrix, but everything on the OB-6 is accessible directly without a menu. In addition, the OB-6 has one more voice and also has a little more vintage charm in terms of sound, while TEO-5 sounds more modern.

On paper, the UB-Xa Desktop with 16 voices at half the price naturally appears more attractive. In terms of sound, however, it is only comparable to a limited extent with its Lowpass Filter based on the Oberheim OB-Xa. In addition, it cannot compete with the Oberheim in terms of feel and appearance, and TEO-5 also sounds more transparent and refined overall.



More Info

VERDICT

TEO-5 modules offer that special Oberheim charm in a compact format for the desktop, and at an affordable price. With its creamy filter and stereo options, it masters almost all of the classic sounds for which Tom Oberheim's synthesizers are legendary. Thanks to extras such as Through-Zero FM, a large Modulation Matrix, and modulatable effects, TEO-5 also offers modern-sounding assertive Leads, round Basses, cinematic Pads, percussive and pseudo-acoustic Sounds, and quirky Effects.

The operation is intuitive and the hardware is very high quality, making the TEO-5 a compact all-rounder for the studio. While it doesn't quite offer the vintage charm of the OB-6, it impresses with more modern features and sound. In direct comparison to the very similarly designed Take 5, I personally prefer the sound results of the TEO-5 because the VCOs and filters with TZFM and Multimode are more flexible and better matched in terms of sound.

TOTAL
CONTROL.
NO
CLIPPING.

THE BEST OF BOTH WORLDS

Thanks to its 32-bit float recording technology and dedicated gain controls, the H5studio offers the best of both worlds. There is no risk of clipping and no need for post-processing.

With its transparent sound quality, studio-grade preamps and smart synchronisation options, creative professionals can now record anywhere, anytime with the largest microphones of any handheld recorder to date.

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zoomunitedkingdom
ZoomEurope

www.zoom-europe.com | www.zoomcorp.com

sound service

Test: SOMA Harvezi Hazze

We pay attention when SOMA has something new to offer, because their gear usually has a surprising or experimental twist. Harvezi Hazze is dedicated to what is perhaps the most popular effect of all time: Distortion. After all these decades and thousands of variations on the market, is there anything left to add to this type of effect? We'll see if it's just another distortion pedal or if this stompbox has the SOMA factor. **by Daniel Bock**

Features

- Distortion with soft, hard clipping or feedback
- Waveshaper based on a double-base diode (unijunction transistor)
- Tone stack with bass boost, high cut, tilt EQ, or low-pass filter
- Optical compressor with fixed parameters
- True bypass
- Sturdy metal housing
- Size: (W x D x H) 115 x 130 x 40 mm
- Weight: 0.78 kg

Facts

Manufacturer: SOMA Laboratory
Website: somasynths.com
Distribution: Website
Price: 329 Euro

- ▲ Diverse sounds between distortion & fuzz
- ▲ Unique concept
- ▲ Applications
- ▲ Robust construction

Sound: ■■■■■□
Operation: ■■■■■■
Price/Perf: ■■■■□□

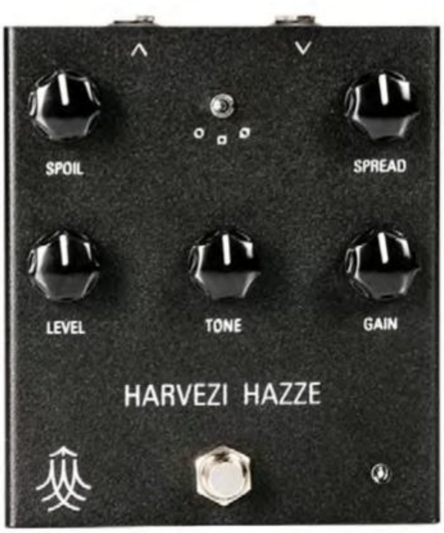
Rating: ■■■■■□

Alternatives

Walrus Audio – Eons Fuzz
241 Euro
walrusaudio.com

Strymon – Riverside
329 Euro
strymon.net

Kasleder – GE Vintage King
299 Euro
kasléderfx.com



Limiter, distortion, waveshaper, and generator – all this is supposed to be in this stompbox. The Russian company has the pedal manufactured in Georgia. In the local language, the name probably means something like „transmission error." This suggests it could sound quirky. The signal flow goes from the Input (mono) to an Optical Compressor that cannot be further adjusted, then to the Distortion, then to the Unijunction Wavefolder, finally into the EQ section, and then to the mono output.

First Look: Simple controls on the front

A glance at the surface doesn't reveal where the many features are supposed to be. Level, tone, and gain controls are familiar. Spoil and spread are more exciting and are responsible for the unijunction waveshaper. Spoil determines the point at which the wave is folded, and Spread is responsible for the strength of the fold. Both controls work closely together and can produce subtle changes, fuzz and gate-like effects, or almost complete extinction. The small toggle switch switches the distortion section between soft, hard clipping, and a feedback mode capable of self-oscillation. The latter, with spoil and spread, ensures a thorough deconstruction of the input sound.

Second Look: complex possibilities through side switches

If you take a closer look at the housing, you will discover six recessed switches on the side that allow you to further influence the sound. Tone stack makes it possible to bypass the tone control. Compressor does the same for the simple optical compressor. Bass boost amplifies the low range. High cut cuts the highs. Notch freq changes the center filter frequency. Tone mode switches the function of the tone control from tilt EQ to lowpass mode. Wow! Suddenly, there are countless possibilities for shaping the sound. So, let's get started and try it out on your instruments!

Sound processing: gentle coloring and total demolition

First, I grab my current setup: A seven-string guitar with high-output pickups connected to an amp modeler. I place Harvezi Hazze directly after the guitar in the signal chain. After a little adjustment of the control settings (hard clipping, spoil, and spread in the middle position, for example), I find inspiring, modern sounds with plenty of punch for all kinds of riff-heavy playing. In the next scenario, the test candidate is placed between a vintage Strat and a tube amp. With subtle control settings and soft clipping, Harvezi Hazze can sound classically bluesy here. A fuzz—with or without gating—also comes across convincingly at higher Spoil and Spread settings. Thanks to its large volume reserves, the pedal is also suitable as a boost in front of a tube amplifier. One of my favorite uses for distortion is to enhance simple analog mono synths. Here, Harvezi Hazze shines, in my opinion. The tone-shaping options are valuable and offer effective frequency adjustments. This makes it easy to set up a punchy, biting, fat lead or a powerful bass sound. MPC and analog drum machines were also put through their paces sonically. The results were quite impressive. The gating effects of the waveshaper delivered interesting beat variations, and the "dirtying" and thickening of the drums also worked well. This application wasn't my favorite, but my boss, Marco, had a lot of fun with it while jamming.

Verdict

Drop Knife is a polarizer. Hats off to Harvezi Hazze! This isn't just another clone of a well-known circuit, but a new development that makes use of the Unijunction Transistor, an unusual component. Even though there are sonic overlaps with well-known classics, this pedal stands on its own. It can be both modern and vintage. Its greatest strengths are, therefore, its adaptability and versatility, which are achieved through the extensive control options and combination of the built-in elements. Guitarists who are looking for new tones but don't want to miss out on classic applications, as well as multi-instrumentalists who are looking for a useful, versatile studio tool in the distortion range, have come to the right place. In any case, Harvezi Hazze is now on my wish list.

Demo Video

Power Producer: Ableton Push

More groove for live performers

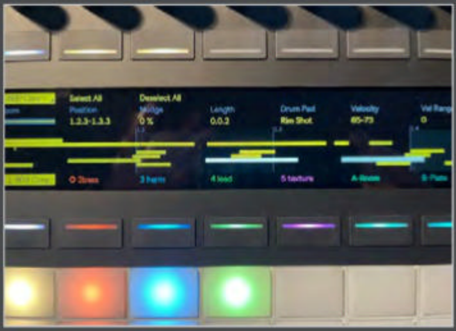
The update to Ableton Live 12.2 eliminates typical performance issues such as rigid grooves, imprecise timing, and confusing scenes: Push 3 now allows direct access to the Groove Pool, targeted quantization of individual notes, and color-coded scenes. This allows you to control timing, groove, and song structure directly on the controller—smoothly, precisely, and without having to go through the screen. The following workshop shows you how it works. **by Maya C. Sternel**

Project information

Material: Ableton Live 12.2, Push 3
Time required: 30 minutes
Content: More control, overview, and expression in the Live set – through the new performance features of Ableton Live 12.2, controlling timing and groove directly on the controller, making grooves more dynamic live, clearly structuring scenes with color codes.
Difficulty: Advanced

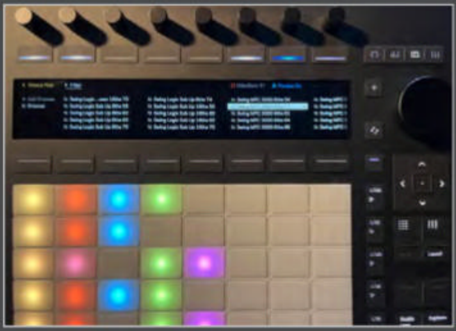
1 Stabilize timing

For a more natural sound, start by playing a drum beat live. To stabilize the rhythmic center without disrupting the flow, quantize individual drum sounds. Hold **Quantize** and select the desired grid value under **Quantize** to something like **1/16**. Open the Clip menu and scroll through the notes using the Push encoder.



2 Adjust drums

Press the Push Encoder once to select individual notes. Tap briefly on **Quantize** to place them precisely on the grid. To quantize all notes of an instrument, hold **Quantize** and tap the corresponding pad in the Drum Rack, like the kick. This way, all kicks are corrected without altering the rest of the timing.



3 Load grooves

To give your beat a more lively swing feeling, add a Groove Template. Select a clip in the Session View and open the **Groove Pool** via the button above the display. Then, select the button over **+ Add**. Now use the Push Encoder to select a groove and briefly press the Encoder to load it.

4 Apply groove

The loaded template now appears in the Groove Pool. Switch back to the clip view and select the desired Groove Template via the Encoder under Groove. If you want this **Groove** to be automatically applied to all new clips in the future, activate **Auto Add** in the Groove Pool.

5 Control intensity

In the Groove Pool, you also determine how much the Groove Template affects the clip. Change the **Global Amount** parameter to bring even more dynamics to your set: Choose a value between 20–60 % for calmer parts, and up to 100 % for the drop. This lets the groove breath and controls the energy flow and tension live.

6 Color scenes

Clear color structures help keep an overview in the set. Since Live 12.2, you can assign unique colors to scenes, such as red for the Drop, blue for Breaks, yellow for Builds, or green for the Outro. To do this, hold down **Shift**, select a Scene Starter, and set the color. This allows you to see the energy and progression of your performance at a glance.

Monthly music treasures

compiled by Sascha Blach

Afterlife: Standing At The Foot Of The Mountain

Steve Miller has created a pleasantly sophisticated album between ambient, jazz, and minimal here. That the British artist was previously known primarily for Ibiza sounds and Café del Mar contributions is irrelevant this time. „Standing At The Foot Of The Mountain” is darker, more existential music, often heavily stripped down and thus possessing an immense atmosphere. The tracks occasionally touch on avant-garde and neoclassical, are experimental, profound, and reflective. Whether with synthesizer, piano, double bass, xylophone, or field recordings – the producer, who is active since the mid-90s, essentially paints with sounds here and thus genuinely opens the door to the afterlife a little.

Genre: Ambient | Label: Subatomic UK

Hybrid Leisureland: Flower Bullet

Hidetoshi Koizumi alias Hybrid Leisureland had an interesting guiding principle during production: If bullets – or in a figurative sense malicious words – were flowers, they could no longer hurt us. This explains the title. His album is mostly instrumental, making music his language. Soft piano sounds and alienated, subtle electronic beats typically dominate the work of the Tokyo artist. In „Hope Of Days“ and „Crying Tomorrow“, ethereal female vocals float through the room, and in „Time Laps“, a dominant, jazzy drum takes over suddenly. Yet, the album mainly offers a cozy mix of ambient and neoclassic – playful yet atmospheric, melodic and a little experimental. In short: Flowers for the ears!

Genre: Electronica, Neoclassical | Label: Sonar Library

Nine Inch Nails: TRON: Ares

That Trent Reznor and Atticus Ross release the soundtrack for the new Disney movie TRON: Ares as Nine Inch Nails may surprise initially – after all, they have released numerous scores without the band name in recent years. This 24-track work also begins like a typical sci-fi score with dystopian synth sounds. But already by track three, the pre-released “As Alive As You Need Me To Be”, it’s classic NIN stuff between rock, electro, and industrial, carried by Reznor’s distinctive voice. Instrumental synth passages alternate with vocal tracks like the calmer „I Know You Can Feel It” or „Who Wants To Live Forever?” in the further course. The danceable „Infiltrator” would also have worked great as an NIN number with vocals. All in all, the truly NIN-sounding material would have only sufficed for an EP – the rest is classic film music – yet the naming still makes sense.

Genre: Electro, Soundtrack | Label: Interscope

XPQ-21: Overgod

Many of you know Jeyênne from our magazine, where he regularly contributes as head of the Electronic Music School (EMS). But he is also active as an artist in electronic music – and has been so since the early days of the techno and rave movement. Since then, his project XPQ-21 has undergone a remarkable development. The new album „Overgod” offers an exciting sound after a longer release break, drawing from industrial Rock, EBM, and Electropunk. The versatile work resembles a roller coaster ride and encompasses many facets – from club-suitable moments to rock hints to dark, ambient passages. One frequently gets reminded of American industrial bands, and Jeyênne‘s techno past occasionally shines through. In terms of production and vocals, „Overgod” is above average and sounds like it underwent a long, intense creation phase.

Genre: Industrial, Electro | Label: XPQ-21

Dominik Eulberg: Lepidoptera

The album title doesn’t seem particularly catchy at first glance. In connection with the cover artwork, however – it makes sense. „Lepidoptera“ means butterflies, and when you know Dominik Eulberg is not only a musician and producer but also an ecologist and knowledge communicator, the overall picture fits. His new album is dedicated to the diversity of butterflies: Each track bears the name of a species, such as „Kleines Nachtpfauenauge“, (engl. Small Emperor Moth), „Trauermantel“ (engl. Mourning Cloak), or „Totenkopfschwärmer“ (Death’s-head Hawkmoth). The graceful insects are celebrated with a mix of clubby Electronica, Ambient, and playful orchestral elements. Everything sounds light-footed – or rather: light-winged –, atmospherically and yet sophisticatedly staged. Even lovers of well-made electronica without a penchant for butterflies will fully get their money’s worth here.

Genre: Electronica | Label: !K7 Music

Nightmares On Wax: Echo45 Sound System

The new album by Nightmares On Wax not only sounds stylistically like a mixtape, but also contains numerous transitions and jingles à la “you’re listening to Echo 45 Soundsystem”, allowing all tracks to flow seamlessly into each other. This creates the charm of a pirate radio station. The fact that this impression is so clear is also due to the many guests at the microphone, all of whom are also shown on the cover. Among others, Yasiin Bey, Greentea Peng, Sadie Walker, or Liam Bailey enrich the sound of George Evelyn, the brain behind Nightmares On Wax, with their voices and different timbres. The album combines Downbeat, Hip-Hop, Soul, Roots, and Dub into a lively, vibrant soundscape, also supported by socially critical lyrics. How fortunate it is that George’s mother once bought him an old, battered speaker box for five pounds, which he named „Echo45” – its echo is still clearly heard today.

Genre: Hip-Hop, Soul, Dub | Label: Warp Records

Peter Mergener: Chip Meditation 2025

In the 80s, Peter Mergener co-founded the intermedia art project Software with Michael Weisser, followed by numerous solo works between Electronica and Ambient. He sees his new album „Chip Meditation 2025” as a tribute to the 40th anniversary of the Software classic of the same name from 1985. The eight pieces float spacey through the ether, carried by vast pads, arpeggios, and subtle beats. Naturally, the sound is super-nostalgic and repeatedly evokes memories of the synthesizer musicians of the 80s. Sometimes it has something of an atmospheric science fiction score à la Vangelis, sometimes of classical space music or simply of computer chips meditating in a relaxed manner.

Genre: Electro | Label: Spheric Music

Weval: Chorophobia

The title „Chorophobia” describes the fear of dancing. So far, the two Weval protagonists Harm Coolen and Merijn Scholte Albers had always avoided making music for the dancefloor – despite their deep roots in the club scene. On „Chorophobia”, the Dutchmen throw this restraint overboard and simply do what they feel like. Why not deliberately use drops, higher BPM counts, or driving hi-hats? The result is not a pure club record, but rather a multi-layered work that connects Dance, Electro, and Pop and integrates influences from funk, acid, UK bass, and film music. An album that works equally well in DJ sets as it does through headphones alone. In short: Weval brings art and dancefloor compatibility elegantly together.

Genre: Dance | Label: Technicolour

Your eventplanner for 2025/26

14.11.2025 - 15.11.2025
Music Expo 25
San Francisco, US

28.11.2025 - 7.12.2025
Black Friday & Cyber Monday Week

20.01.2026 - 24.01.2026
NAMM Show
Anaheim, US

03.02.2026 - 06.02.2026
ISE 2026
Barcelona, ES

24.03.2026 - 26.03.2026
Prolight + Sound
Frankfurt, DE

07.05.2026 - 09.05.2026
Superbooth
Berlin, DE

13.05.2026 - 17.05.2026
Berlin Dance Music
Berlin, DE

04.06.2026 - 07.06.2026
HIGH END Vienna 2026
Wien, AT

18.06.2026 - 20.06.2026
Sonar Festival 2026
Barcelona, ES

Beat 01 | 2026
out 5th December 2025

Masterclass: Studio Monitors 2026

Your monitor setup is the most important tool in your studio. But what makes a good monitor, and how do you get the best quality out of your system? In our masterclass, you‘ll learn how to master proper speaker placement and room acoustics, which myths you can safely forget, and how to mix professionally even with headphones. We‘ll answer the most common questions about 2-way vs. 3-way speakers, the necessity of subwoofers, and much more. We‘ll also take a look at the most important speakers on the market and compare them in a comprehensive Speaker-Finder, so you can find the ideal setup for your studio and budget.

Test: Novation Bass Station II Swifty

The Bass Station II is one of the most popular analog mono-synthesizers and an essential part of countless studios and live performances. The functionality of this compact keyboard has been continuously expanded through free updates. We took the new edition in the special „Swifty“ design as a welcome opportunity to take a closer look at the Bass Station II and compare it with its current competition, especially the similarly structured Moog Messenger.

Interview: XPQ-21

„Uncompromising, relentless, a complete reorientation“—these are the terms being used to describe the new XPQ-21 album, „Overgod.“ After a long hiatus, mastermind Jeyênne is back with a powerful hybrid of EBM, rock, drum‘n‘bass, and electro. We‘re interested not only in the times of transformation but also the details of the production.

Photo: Yaan Alexeev

Test: Groove Synthesis 3rd Wave 8M

With the 3rd Wave, the small company Groove Synthesis surprised everyone with an elaborate hybrid synthesizer based on the legendary PPG Wave, but at a high price. The smaller 8M version is more affordable at around €2,000. The sound quality and engine largely correspond to the 24-voice flagship, but with only 8 voices and reduced direct controls. The desktop synthesizer specializes in wavetable synthesis but also offers VA synthesis, FM, and sampling, as well as analog and digital filters.

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